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FEATURING

## Let the Finder **BEWARE**

An Amazing Novel  
By JAMES BLISH

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### THE LONELY PLANET

*A Fantastic  
Novelet*

By MURRAY  
LEINSTER

### THE SHROUD OF SECRECY

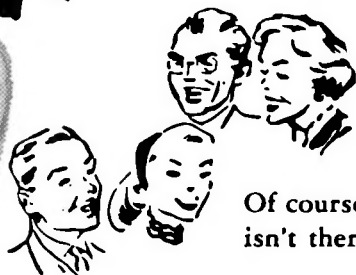
*A Cal Meacham  
Novelet*

By RAYMOND  
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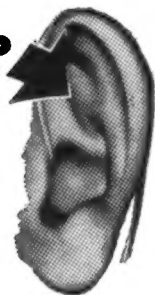
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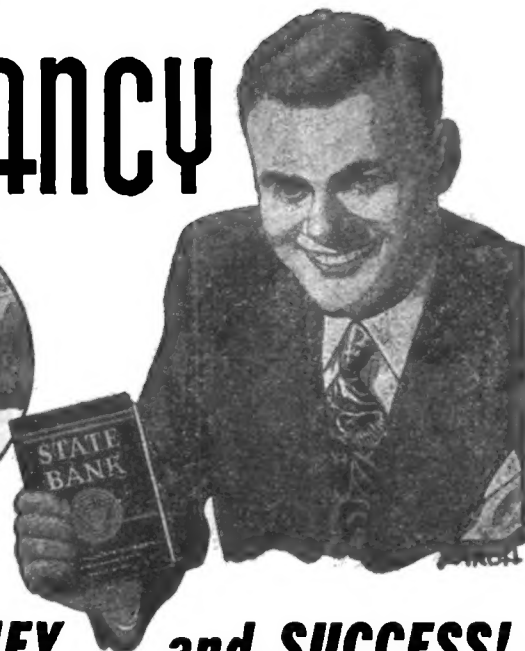
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VOL. XXXV, No. 2

A THRILLING PUBLICATION

December, 1949

## A Complete Novel



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By JAMES BLISH

*When Danny Caiden discovers that he is able to foretell the future, he realizes he must find out how and why—or go thoroughly mad!*

11

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**THE LONELY PLANET**.....Murray Leinster 80

*Revolving, sentient and unique, the creature-planet Alyx learns about men—and with catastrophic results, tries to serve them!*

**THIRTY SECONDS—THIRTY DAYS**.....Arthur C. Clarke 106

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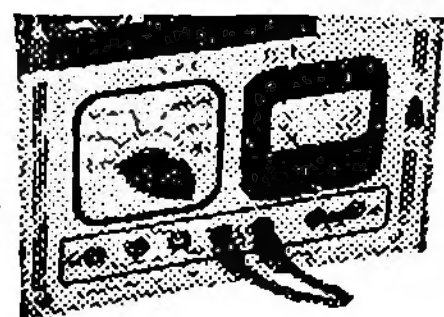



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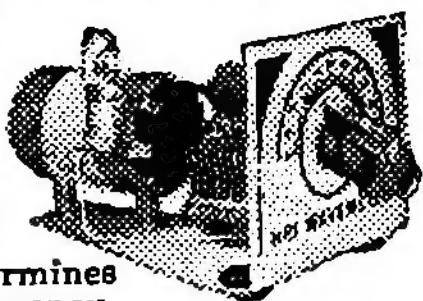
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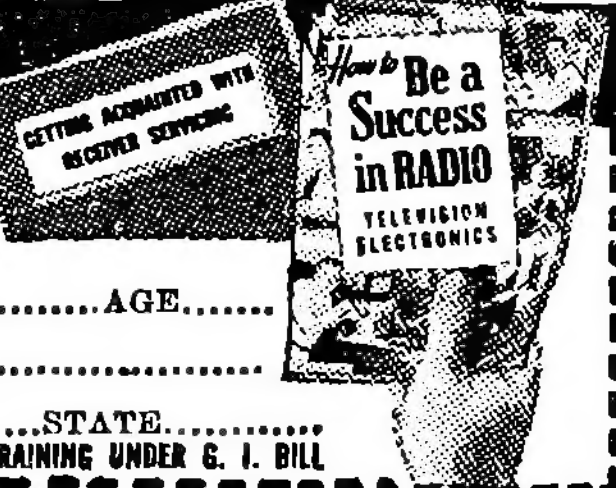
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## A DEPARTMENT FOR SCIENCE FICTION FANS

**T**HERE was an interesting little story buried in an inside page of the Science News Letter for July ninth of this year. The gist of its four paragraphs was that two rare forms of white blood cells have been appearing in the veins of workers on the 130-inch cyclotron in Rochester, New York.

A cyclotron, as virtually all of you must know, is an atom-smashing machine and it is logically believed by medical men that the alien white cells are the result of close contact with induced atomic experiments. Which is provocative of some extremely interesting speculation.

True, one of the strange cell-types, a mononuclear affair, is not new to medicine—it has been previously spotted in the blood of anatomically-associated folk suffering from sore throats and other infections. But none of the workers in this instance was so infected. And the other new cell-type, which has a double nucleus, has not previously been recorded by scientists in normal blood.

### Biological Changes

Perhaps the biological changes of the Atomic Era, awaited with hope and dread since the first detonation of the A-bomb at Alamogordo in late July of 1945, have already begun to show themselves.

Some time ago we had occasion to remark that, according to the best scientific opinion, it would take scores, perhaps hundreds of generations before the results of the Hiroshima and Nagasaki A-bombings would reveal themselves in mutations of the human species—this according to fruit-flies, guinea pigs, golden hamsters and other laboratory creatures.

The response this statement drew was curious to say the least. The attitude revealed by those who wrote in about it was one of distinct disappointment that drastic human mutation should be so long delayed. It was, "Shucks! Then we're going to miss all the fun."

To which our only reply was a silent but heartfelt, "Ouch!"

But for these impatient ones the story from Rochester should bring a ray of hope. The Atomic Age is definitely with us and apparently the mutations may come more rapidly than was supposed. At any rate, not only will there be some changes made but some changes are apparently already in the making.

We recently received and rejected a story in which human beings, taking off for space, were transformed by cosmic rays into apes in a matter of hours. This, we felt, was an overtax of both editor and reader credulity. But that something is coming and coming rapidly in a biological sense seems probable.

We are not going to hazard any guesses as to when changes will become noticeable, how they will affect humanity and what direction they will take. There is not enough evidence in as yet for even the wildest of guesswork. But we intend to keep both eyes and ears open for clues.

### New Types of Men

The idea of human mutation under the influence of atomic radiation or cosmic rays is scarcely a new one in stf. It has—at least along certain obvious lines of conflict—been done virtually to death. Now, it seems, the reality lies just below the horizon. It  
(Continued on page 8)



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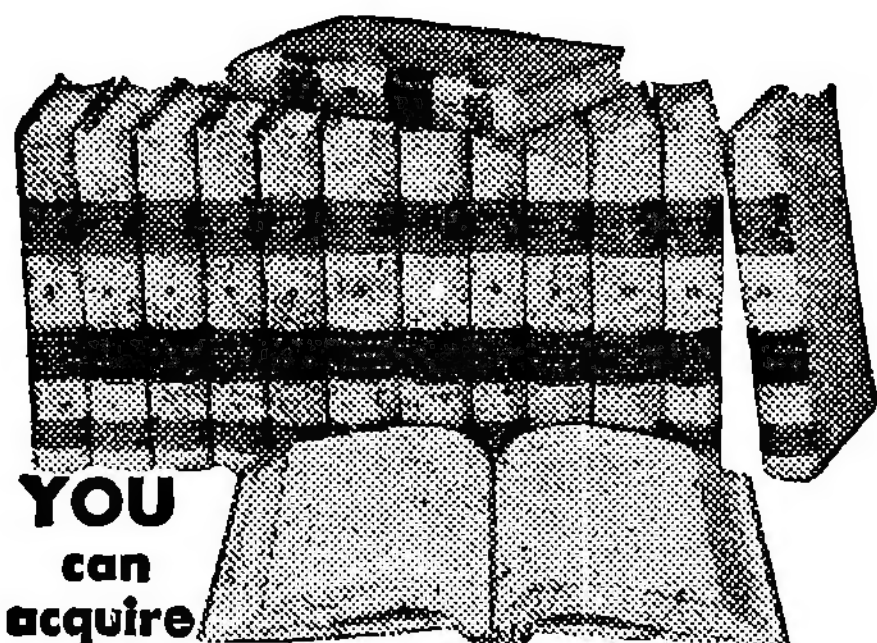
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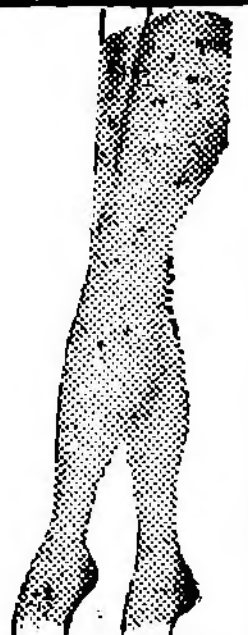
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# **THE READER SPEAKS**

*(Continued from page 6)*

will be at least interesting to discover how close to the future the writers have come.

The extremely eminent Dr. Olaf Stapledon, whose position in English science, philosophy and letters is roughly analagous, if more active, to that in this country of Dr. Eric Temple Bell-John Taine, has propounded the theory of induced mutation to meet extraterrestrial conditions in his famed lecture on "Interplanetary Man."

He suggests that, to meet the alien gravities, atmospheres and other conditions of the planets it will be necessary to create new types of homo sapiens—some of which will resemble what we are currently accustomed to pass in the streets only superficially. He may well be right—he very often is.

Or perhaps, under the biological impact of the Atomic Era, evolution may run completely amok, making the "sport" the normal and the normal a sport. In such case it seems unlikely that human evolution will proceed uphill. It will scatter unthinkably as to type, and annihilation or retrogression or both will be the only possible result.

However, Man is a tenacious and adaptable breed of creature. And under the stimulus of atomics, once he has accustomed himself to the idea, he may succeed in frustrating his suicidal impulses and accept wisely the gift of stepped-up development to be used for his own improvement.

When, as and if such developments occur it is highly probable that he will proceed along every line that opens to him—both good and harmful. It is what he does in the main that will count—and in the main he wants both to survive and to improve.

## **A Gradual Process**

The sudden emergence of a group or class of mutated supermen seems unlikely and much too simple, although this is a favorite theme of science fiction authors—perhaps because it lends itself readily to conflict.

From H. G. Wells' "Food of the Gods" to A. E. van Vogt's "Slan" this conflict between man and the mutational superman has been represented in terms of restriction, warfare and annihilation. Mutants are harried, hounded and hunted by resent-

ful "normals" who refuse to accept secondary roles in the evolutionary scheme of things.

It is our hunch that the whole process will be far too gradual and too diffuse to permit of any such concentrated action—at least for long. The whole pattern of human history is against such conflict.

In almost every case, during the post-Renaissance discoveries of American natives—Indian, Aztec and Inca—and of the aborigines of the Pacific areas and of Central and Southern Africa, it has been the superman (i.e, the white man) who has promoted the conflicts which resulted in the near extermination of the native races.

The savages for the most part were pathetically eager to welcome the newcomers, who seemed to offer a way out of the squalor, filth and disease in which most of the so-called savages lived. In many instances the newcomers were considered and treated as gods by virtue of their superior artifacts.

It was not until Imperialistic Europeans practised exploitation and enslavement beyond endurance that the natives rebelled as a general rule. The hatreds engendered by the ruthless suppression of these rebellions through the "civilized" weapons of sword, gun and starvation have survived in too many cases to the present day and are at the root of much of the vast disturbance which is currently causing misery throughout the globe.

Nothing to Fear

If we should suddenly find ourselves being led out of our difficulties by a superior breed of men, who reveal ability to slice through the apparently insoluble problems that face us as easily as Alexander sliced the Gordian knot, it is unlikely that we would feel resentment—at least as long as such leaders did not reduce us to slavery and want.

And if these new beings were truly superior, they would scarcely employ such weapons, nor would they need to. For the men who destroyed the Inca and Aztec empires were removed from their victims only by the steel of Western Europe and the accidental lack of black or copper pigmentation in their skins.

We ought not to fear the thought of mutation—nor the reality—if it opens a path of existence improved mentally and spir-

(Continued on page 141)

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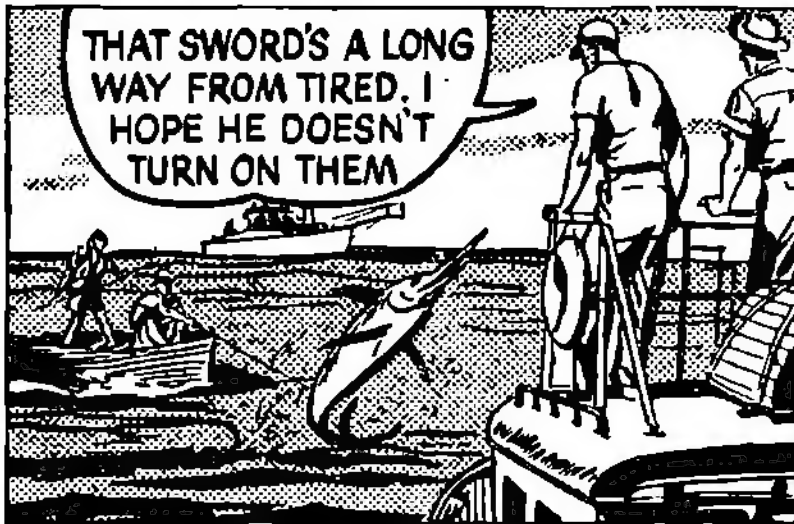


# JOE HARPOONED A SWORDFISH, BUT THEN...



GOT HIM! STAND  
BY TO HEAVE THE  
MARKER, SIS!

THEIR FAMILY CRUISER SPECIALLY FITTED  
WITH "PULPIT" AND "LOOKOUT," BETH BROWN  
AND HER BROTHER, JOE, TRY THEIR LUCK  
AT HARPOONING A SWORDFISH...



THAT SWORD'S A LONG  
WAY FROM TIRED. I  
HOPE HE DOESN'T  
TURN ON THEM

THINKING THE HUGE FISH TIRED FROM  
DRAGGING THE MARKER, OUR  
HARPOONERS USE THEIR DORY TO CLOSE  
IN FOR THE KILL WHILE BILL BLANE AND  
HIS FRIEND WATCH THE SHOW...



HER FOOT'S  
CAUGHT!

KEEP THIS  
BOAT CLEAR!  
I'VE GOT TO CUT  
THAT LINE!



SHE'S OKAY,  
I THINK. JUST  
SWALLOWED  
SOME WATER

THANK HEAVENS!  
THAT WAS MIGHTY  
QUICK WORK ON  
YOUR PART



I'M KEEPING BLANE  
ABOARD FOR DRY  
CLOTHES AND A  
SNACK. WE'LL  
MEET YOU IN  
PORT

THIS WOULD  
BE THE DAY I  
DIDN'T SHAVE



...AND  
HERE'S  
A RAZOR,  
TOO

THANK  
YOU,  
SIR



THIS IS THE BLADE  
FOR ME! NEVER HAD  
AN EASIER, MORE  
REFRESHING  
SHAVE!

THIN  
GILLETTES  
MAKE SHORT  
WORK OF TOUGH  
WHISKERS. THEY'RE  
PLENTY KEEN



...SO NEXT WEEK  
MY SHINGLE GOES  
UP - "BILL BLANE  
CONSTRUCTION  
COMPANY"

WELL! JUST  
IN TIME TO BID  
ON MY NEW PLANT

HE'S SO  
HANDSOME

MEN, FOR BETTER-LOOKING SHAVES... QUICK AND  
SMOOTH... **TRY AMERICA'S LARGEST-SELLING  
ECONOMY BLADES ...THIN GILLETTES.** THEY'RE  
FAR KEENER THAN ORDINARY BLADES AND LAST FAR  
LONGER. FURTHER, THEY FIT YOUR GILLETTE RAZOR  
EXACTLY AND PROTECT YOU FROM NICKS AND  
IRRITATION. ASK FOR THIN GILLETTES IN THE  
10-BLADE PACK WITH THE HANDY  
USED-BLADE COMPARTMENT


**THIN  
Gillette**  
10 BLADES  
THIN  
Gillette  
10 BLADES  
10-25¢  
4-10¢

NEW TEN-BLADE PACKAGE HAS COMPARTMENT FOR USED BLADES



# Let the Finder BEWARE!

*When Danny Caiden discovers he  
can foretell the future, he must learn  
how and why, or go thoroughly mad!*



"You look intelligent," the  
girl said to Danny. "What's  
brought you in here?"

**a novel by**  
**JAMES BLISH**

## CHAPTER I

### *Whispers in the Earth*

**I**T was a strange business, all of it. Not frightening, exactly—at least, not at first. It was just odd. It didn't fit—didn't make sense. Maybe the strangest thing about it was that it happened to Danny Caiden.

Danny knew there was nothing wrong with him. He had an average income and enough education to handle the packaging page for a food-industry trade paper, even enough to write a poem or two on the side. It was not



good poetry, but just an outlet for the way he felt on good days and bad ones. He was a little under six feet, with yellow hair, a friendly face with a nose that was slightly too large for it and no obligations to anybody but himself.

He was like many of the people in the world he occupied and he liked both the people and the world. On the rare days

when he got sick of being enthusiastic over the latest way of wrapping something basically inedible so that people would eat it, his stories became a little more acid and he had a beer or so before going back to his apartment. On the days when he loved everybody and did not have to work, he had a lot of beers and slept until noon.



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## A Wild Talent Menaces a Psychic Monopoly!



A forest of lightning-bolts played gleefully upon the corner of the building

A normal guy, Danny thought. He lay on his bed and wiggled his stockinged toes in the yellow lamplight. No anxieties, no woman trouble, no troublesome political ideas. He didn't care who was elected this year or any year, and he hadn't even a cold.

But all the same, he was sitting there at 3:00 A.M. on the morning of a work-day and wondering why he had visions.



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He turned the word over a few times. It wasn't quite right. What he had been having lately was voices—no, not even voices—just noises. Noises that happened twice—once inside his head and once outside.

That day for instance. He had come out of Childs after lunch, feeling a little too full, and had started to turn the corner to go back to the office. He remembered being in the middle of a step, remembered wishing that his other suit would get back from the cleaners. He remembered wondering whether or not he'd be sleepy in the middle of the afternoon, and whether or not the man from the orange-growers' association would confirm that idiotic report that had come in from the trade paper's Florida correspondent, whether the senior editor would allow Danny's caption on the bread-eating campaign picture to go through.

Just around the corner someone screamed. There had been a screaming sound of brakes and rubber. Then something metallic had hit something else. The impact was sudden and quickly over, almost as if a truck full of brass had been thrown off a high building.

Then there were more screams and the sounds of people running.

Danny didn't run. He had stopped abruptly and put his back against the cool concrete flank of the building. A month ago—about that—he had been coming around this same corner and had heard those same noises. He had run then but he'd found nothing around the corner but the usual slow rivers of people trudging back from their lunch hours. No horrified crowd—no accident—nothing.

**N**OW he was afraid to go around that corner. He had forgotten the original illusion until now. But the exact one-for-one correspondence of the sequence of sounds scared him and brought the first experience sharply back to mind. It was hard to believe that Danny's stable, basically untroubled mind was slipping—but two illusions of this kind were enough to upset the most phlegmatic of men.

People ran past Danny. He could not remember *seeing* anybody running before. Fried scallops clumping in his stomach, he went around the corner.

It had been an accident all right. A

cab, trying to beat a light, had hit an avenue bus amidships and the gas tank of one of the two vehicles—it was hard to tell which—had burst. There was a pyre at the intersection and carbonized bodies sprawled or twitched feebly. The mob had drawn back, murmuring with horror and fascination.

Danny, sick, had detoured, and stumbled his way to his elevator. He was good for nothing for the rest of the afternoon. It was bad enough to have had the sounds of the collision in his head—but for Danny every one of those sounds had an echo. He had heard it a month before it happened.

He was bawled out twice by the senior editor for being sarcastic about the merits of free enterprise, and afterwards had more than enough beers to put him back into an uncritical state.

But now, at 3:00 A.M., Danny was sober, awake and twitching his toes speculatively in the lamplight. For him that accident had happened twice. Something had made him hear it before it happened. And things like this often happened to Danny.

There was that finding trick. He had been kidded about it a long time but it worked—like last winter. Bill Emers had called from Banff, drunker than Silenus, demanding to know where he'd left his ski-wax.

Without bothering to think Danny had said, "You put it on the right corner of the mantel but it's been dumped off somehow. It's probably in the bucket with the fire-tools."

It was too. Danny had never been to Banff, let alone to the lodge where Bill had been staying at the time. He had simply spoken without thinking, and he had been right—every time.

So there it was. He took no stock in the supernatural but it was too late to ignore the fact that there was something strange about himself. Prophetic noises, a long-range sensitivity to where things were . . .

Was that it then? A sensitivity—a special ability? There was always talk in the newspapers about people who could pull off tricks that others couldn't—women who glowed in the dark, girls who went floating out of their bedroom windows, little boys who attracted gushes of water and oil or even "flows" of rocks. As a rather low grade newspaperman Danny had seen more than his

share of such reports. The great press associations had odd ideas of what might interest a paper about food.

So there was a line. It was no longer a question of just letting things like this happen to him. For one thing, they were too hard on the nerves. And there was always the chance that a special ability could be brought under control. Danny didn't need too much imagination to think of ways to use a prophetic sense. It was time now to find out what he had and why he had it.

If he didn't find out pretty soon, there wouldn't be much left of his sanity. He wondered suddenly if he were already slightly off his chump—the strange noises just the first signs of a crack-up, really not related to outside events except by faulty memory or imagination.

But had he imagined Bill Emers' ski-wax? It seemed unlikely. No he'd have to go ahead on the assumption that he was still sane—find some of these people with weird talents—talk to them—run down whatever had been written about them. There had to be a lead somewhere.

Relaxed by the decision he snapped off the light. At the same instant, for the first time, he heard voices.

He knew at once, without knowing how he knew, that they were not voices of passers-by on the street. They were soundless, inside his head. And yet, somehow, they came from below, whispering—as if in the bedrock of the city.

*"There has been a Decision."*

*"Yes. I have estanned the tension."*

*"But the threshold had been crossed."*

Soundless voices whispering together, meaningless things. Danny felt the sweat coming out all over his body. The empty words had a cold tang of menace. And—they were about him.

*"So many paths."*

*"To the same goal, my brother."*

*"Let the finder beware."*

*"The way is long. We must wait."*

*"Let us wait."*

AFTER that there was a long inner silence. It took awhile for Danny to realize that there was to be no more. It was as if he had heard so much only because it touched upon him—that the whispers murmured now of things incomprehensible and remote, though they still stood at his elbow. The words were

still being spoken but they were not for him.

Danny had the strange feeling that he would have heard nothing even in the same room with the whisperers—their lips would move meaninglessly for him as if in a silent film.

Or did the whisperers even have faces?

He put the question aside. The voices, for all their strange soundlessness, had been human. Their language had been English except for that strange word, perhaps a word labeling the nature of their conversation itself. Danny was not ready to believe in ghosts—not yet.

He realized suddenly that he was utterly exhausted. Above and beyond the tiredness of his night's vigil he felt drained, half dead, as if the mere act of listening to that silent colloquy had been a feat of endurance. His heart thudded in a slow leaden rhythm.

He fell back, trembling. One thing was sure—there was something abroad in the world that normal people like Danny Caiden had never suspected. Something that Danny Caiden was being driven to find, blindly, unwillingly, driven by an unmanageable irruption of wild talents. Something huge—unthinkable.

*Let the finder beware . . .*

\* \* \* \* \*

It was in the middle of the next afternoon that the real blow fell, the blow that committed him to the search whether he willed it or not.

Except for a giddy tiredness, a sort of poisonous residue of last night's drained sensation, Danny felt much better. It was one thing to be alone in a dark room, already overtired and upset, prey to all sorts of dreams and delusions—and quite another to be twenty-one stories up in clear air, in bright sunlight, in one of the most modern buildings in the whole city.

Prophetic sounds, whispering voices—the battering of Al Randall's typewriter at his back was rough on them. Every noisy impact of key on platen pushed them further into the fogs of unreality.

Joan Key, the senior editor's chief factotum, leaned over his shoulder and tossed a sheaf of clippings and releases onto his desk.

"Looks like a bad week," she said resignedly. "Nothing coming in but



junk and not much of that. There's a follow-up on your wienie story in there."

"There is? You should give me big news like that in small doses. My heart isn't what it used to be."

Joan took off her glasses and looked at Danny critically. "Come to think of it," she said, "you do look a little wrung out today, Danny. Food business getting you down?"

"It's the Tantalus complex," Al said cheerfully. "All day long we write about things to eat and there's nothing to chew but the erasers on the pencils."

"I didn't get much sleep last night," Danny said. It made him uneasy to have to talk about it, as if talking about it somehow made it a little more real again. "That accident yesterday made me nervous and then I had funny dreams."

"Dreams?" said Sean Hennessy, the assistant news editor. He was a parlor Freudian, given to spot analyses of everyone he met and had already declared Pat Rickey, the big boss, to be an oral personality. "What kind of dreams?"

"He dreamt he was Drew Pearson," an angry voice snapped from the door. A prickly lump in his throat, Danny looked over his shoulder. The voice belonged to Rickey, who was one of the owners of the Delta Publishing Company. It was only the second time he'd been in the *Food Chronicler's* editorial cubby since Danny had been working there. In one hand he had a copy of the *Chronicler* crumpled into a rough tube. Danny couldn't see which issue it was.

Rickey said, "Where's Mall?"

"He's talking to Mr. Dale in Accounting," Joan said. "Is something wrong, Mr. Rickey?"

"Something wrong! I've got a thirty-time advertiser on my wire, burning hot and ready to cancel, that's all." Rickey jerked Joan's extension from its crutch and growled into it. Joan looked inquiringly at Danny. He had nothing to offer but a miserable shrug.

Almost before Rickey put the phone down Mall, the senior editor, was in the office, looking faintly green and stuttering slightly with excitement. Mall had never quite got over his first fear of being fired, though he had been with the firm eighteen years and drew ten thousand a year.

"Now let's get to the bottom of this," Rickey said grimly. "Your by-line is on this story, Caiden. According to you International Wheat is due to be hit for price-fixing this week. International Wheat is going to cancel its contract with us. It may also sue us for libel and small wonder. Mall, how did this get past you?"

MALL turned a little greener. "That's the issue before last," he said. "I was at the Cannery Convention. Joan was in charge."

Joan looked at the editor, her glance darting over the tops of her glasses like a school teacher pinning down an unmannerly boy. "That's right," she said primly. "I saw the story and passed the statement. Why shouldn't I have? Danny had no reason to make up a thing like that."

"I don't know," Mall said. "He's like most of the rest of you—thinks the day's wasted if he can't be sarcastic about big business at least once."

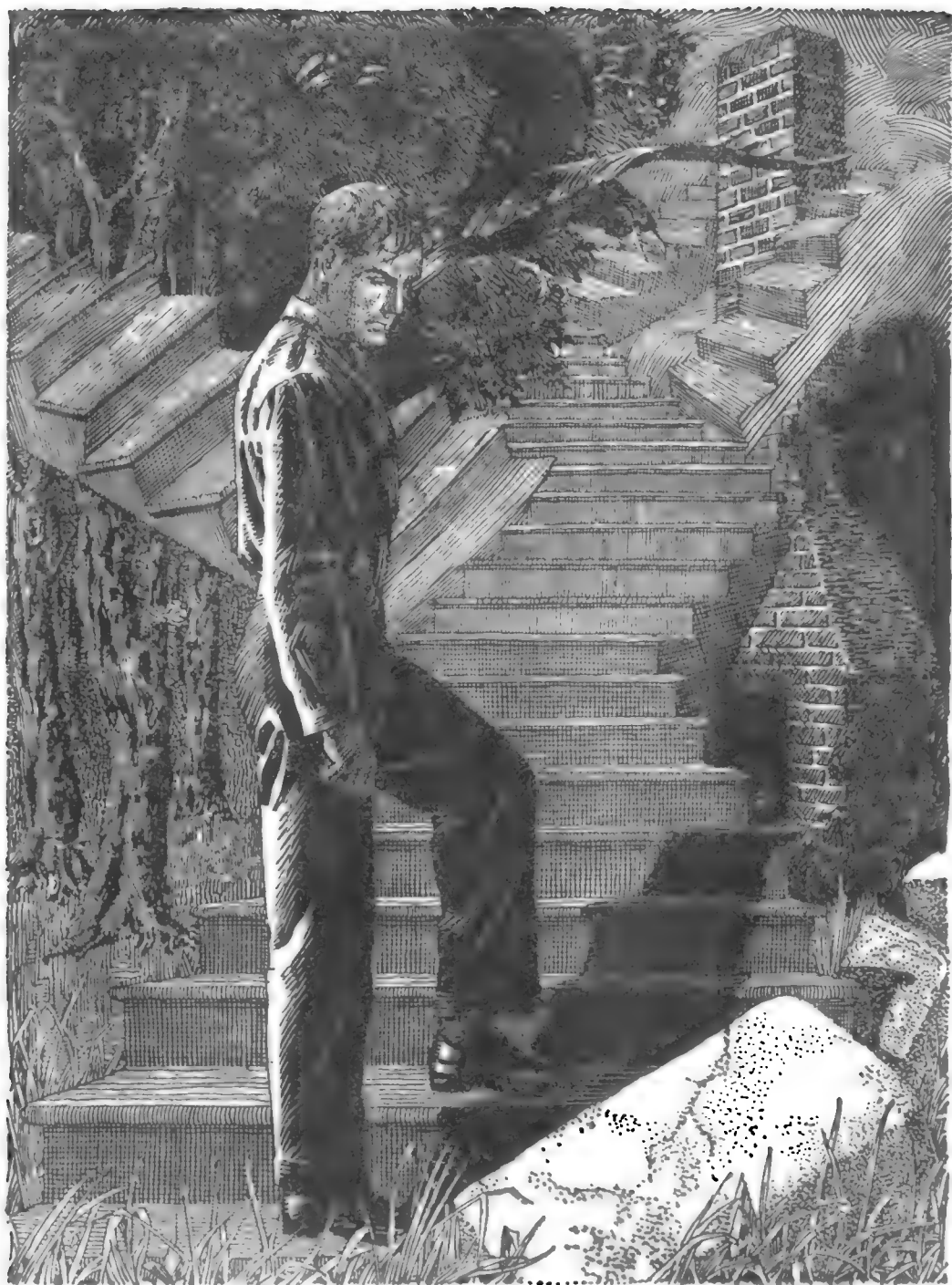
Joan looked more like a school teacher than ever. "Don't be ridiculous," she said. "You'd think price-fixing was Danny's invention to hear you talk. There's been an indictment a week for it ever since the multiple-basing-point decision."

"Why not get the source material out of the files?" Al suggested practically. "If it says International was due to be indicted Danny was within his rights in reporting it."

"It's no less libelous legally for being the truth," Rickey muttered but he seemed willing enough to look at the evidence.

Danny tried to remember what had happened to the source material on the story. The "files" to which Al had referred were actually a set of bins, into which dead releases, clippings and stories from correspondents were thrown after an issue had been put to bed. As soon as a bin was six months dead its contents were baled and sold to be re-pulped.

As far as he could remember, the original story—a clip from the *Journal of Commerce*—hadn't been binned. He'd put it in his bottom desk drawer to await a possible three-em add—a paragraph to be added to the *Chronicler's* account at the last minute when the actual indictment came through.



The sundered steps were still ahead of Denay in the ruins

As he pawed through the papers in the drawer he felt a sick certainty that the clip wouldn't justify him. He hadn't made the part of the story that had upset Rickey out of whole cloth, but out of absolute certainty. What if that "certainty" had been just another wild, uncontrollable phantasm, unbackable by anything in the source files?

"Here it is," he said shakily. He was afraid to look at it. He passed it to Sean, who was closest. Sean immediately began to read it with brash curiosity but Rickey jerked it from his hands.

Rickey devoured it slowly, line by line, word by word, his eyes bulging gluttonously. Danny began to understand what Sean meant by oral personality. Rickey took in that flimsy dispatch as if he were a cannibal and it were a fat missionary. At the end he emitted a sigh of fierce repletion.

"Not a word," he said. "Not one single word. Anything to say, Caiden?"

Danny swallowed. "The week isn't over," he said. "They'll be hit on or before Friday—on nine counts, including discriminatory sales practises."

It was Joan who asked the lethal question but it might as well have been anyone in the tense little office. She said, "Danny, how do you know?"

All five of them looked at him. Danny's tired brain raced but somehow the clutch wasn't in. He knew that he knew. International Wheat would get its indictment tomorrow or Friday. It was the original lead pipe cinch. But he did not know how he knew.

The silence ran out like sand. Rickey said, "All right, Caiden. Pick up your check as you leave."

---

## CHAPTER II

### *The Clouded Crystal Ball*

---

**D**ANNY packed up his property in complete silence—necessarily, because Rickey remained to see that he left. Joan and Al fiddled aimlessly with pencils and would not look at each other or at Danny. Sean ripped the long yellow sheet of copy paper out of his typewriter, collapsed the typewriter into the desk and glared at Mall.

Mall stood up under Sean's Irish indignation for a moment, then sat down at his own desk and ostentatiously began to type. His machine was a *noiseless* but it seemed inordinately loud.

Danny took a manila envelope from the supply shelf and dumped his papers into it. He was beginning to be angry. He found a red china-marking pencil that was strictly the property of the Delta Publishing Company and dropped that in too. Rickey said nothing. He waited until Danny had closed the flap on the envelope and sprung the metal clasp, then left.

Mall continued to type. Sean got up.

"Going my way, Danny?" he said.

Mall stopped typing. "Did you get that coffee bureau story, Hennessy?" he said. His eyes were directed toward a spot about two feet over Sean's left shoulder.

"Yes," Sean said. "I got it. I have a place to put it too if you're interested."

Danny plucked at Sean's elbow. "Don't," he said. "It isn't your fight. There's more to it than you can see."

"I don't give a damn. I'm sick of trying to be timid and obedient. Mall palls on me, all of a sudden. He's too timid to fight for his own staff. What are you writing, Pall Mall? An editorial?"

"I—" Mall said.

"Full of resounding clichés—blow hot, blow cold, say nothing, eh?" Sean said. His young face, dark and beardless as a Spaniard's, was full of pleasure. "All about food. What do you know about food? You live on plaster, like a silverfish—but attractively packaged, of course."

"You're fired," Mall said. "Get out."

Sean chuckled. He looked at Danny. "Isn't he quick?" he said. "You only have to hit him four times and he begins to wonder if he's uncomfortable. Of course he won't *know* he's uncomfortable until Rickey tells him he is. Let's go have a drink."

It was hard not to be delighted by Sean's jubilant support. But Sean lived in the sunlit air twenty-one stories above the street. He might easily have tossed up his job in defense of madness. It occurred to Danny that Sean might take special pleasure in tossing up his job in defense of madness.

Sean was quiet until they were settled in a booth but he looked gleeful all the way. "Been wanting to do that for



two years," he said. "Glad you gave me the excuse—two beers, Junior—or I might never have done it. That's that."

"Now I can start going to school in the daytime. Maybe even get my degree before the war breaks out—not that I'll have any use for it then. Do you know, Danny, I really loved combat? First time in my life I ever felt like somebody. What's your trouble, Danny?"

The question fell so suddenly and with such little apparent significance into the midst of Sean's chatter that Danny found himself answering without thinking. Maybe Sean really should be a psychoanalyst, he thought. He certainly had the gift for luring people into talking.

Yet he could see no reason why he should not tell Sean the story once he had started. The beer helped. Hesitantly it all came out—the noises, the finding trick, the flash of certainty that had got him fired.

**S**OMEHOW, though, he knew it was important not to mention the voices. Partly because it would worry Sean, make him think perhaps that Danny was off his rocker in some demonstrable way, partly because—well, because he knew it was important, knew it as strongly as he knew that International Wheat would be indicted tomorrow or Friday.

"I think there've been some other things but I can't remember them all," he wound up. "I was usually called a 'good guesser' when I was a kid and—I hadn't thought of this before but it seems to fit—the few times I got to the movies in the Bingo days or bought tickets for some kind of raffle I always got something."

"Once I won a coffee pot and the guy on the stage made some crack about Boy Scouts and camping trips because I was wearing khaki shorts and shirt. And once I won a pig—an honest-to-goodness live pig—in a Thanksgiving drawing. I wanted to keep it for a pet but my parents wouldn't let me. They had it butchered and we ate it Thanksgiving. My parents didn't like it—said it was too young to have any flavor—and it made me mad that they'd gone and killed it and then complained afterwards."

Sean grinned and wiped beer foam off his narrow meticulous mustache.

"Sure," he said. "Normal reaction in an—ah—let's call it a possessive personality, a gripping personality, so to speak. Incidentally, I don't take much stock in your 'wild-talents' theory, Danny, if you don't mind. It's ingenious but it breaks down."

"What kind of imaginable talent could take the proper number out of a hat without seeing them and at the same time affect the numbers somebody else took out of a hat to make the first number the winner? Anybody who could control chance that far would be able to slow up horses and push the stock market around without stopping to think."

"Yeah," Danny said. "I hadn't thought of that."

"What interests me," Sean said, "is a great big gap in your story about finding things. What happened to this guy Bill Emers?"

Danny frowned. "Why, I never did see him again," he said. "He was killed at Banff. Went tail over teacup off a ski jump and broke his spine in two places. I suppose he was drunk—he was drunk most of the time."

"Aha!" Sean pounced upon the answer. "But you didn't have any premonition of this? Didn't have any preliminary noises or other sensations predicting his death?"

"No-o-o-o. This kind of thing hasn't happened frequently until lately, though, as I said."

"Of course it hasn't. It's never even occurred to you that Bill Emers probably died the same day you found his ski wax for him. But your unconscious knows it—and blames itself! Accidentally you made a perfectly logical guess. I think I'd have made a very similar guess under those circumstances."

"When you heard of Bill's death—well, you felt guilty. You began to have compensatory symptoms. After the symptoms got disturbing enough, you concocted a theory to explain them."

Sean shoved his empty glass out to the edge of the table. "Danny, you knew—subconsciously—that if you hadn't found Bill his ski wax, he probably wouldn't have tried to make a jump while drunk. You've been blaming yourself ever since. But you're not to blame. As soon as you realize that your troubles will go away."

The waiter took away the glasses,

filled them again and returned them while Danny thought about it. Sean looked as satisfied as a cat who has just caught a big moth—the victim still fluttering frantically but available for the kill at pleasure.

Finally Danny said, "That's good, Sean. I wish I could swallow it. It's better than my theory. But why should I care about Bill Emers? I hardly knew him. He just called me for a gag—he'd heard rumors about my finding trick."

"Resentment," Sean said. "Nobody likes to be the butt of a joke. When you heard that he'd been killed your resentment seemed to you like a good motive for murder. Believe me, Danny, the unconscious isn't rational and it never forgets. It can make you feel to blame for all kinds of fantastic things—things you wouldn't even think of doing with the top of your mind."

"Okay. But this still doesn't explain why I had the reputation for the finding trick in the first place. Everybody I used to know in college came to me to ask where to find things. I was always right. Otherwise they'd have stopped coming to me."

Sean didn't appear to be in the least disturbed. "Coincidence," he said, dipping his nose appreciatively into his beer. "People have an absurd faith in the limited principles of chance. Mathematically it's perfectly possible for coincidences to happen in almost indefinite chains."

"But they don't."

"But they do," Sean said. He pointed a long, slender finger at Danny. "They happen all the time. Why shouldn't they? In an infinity of time anything can happen repeatedly without violating chance. Chance is just a local ordinance. We have a whole school of scholarly nincompoops who keep tabs on repeated coincidences—with cards and dice and prediction and everything else under the sun.

"When they get enough coincidences written down—say about dice—they claim that the man throwing the dice has some influence over them! Just a professorial version of your wild talents theory, except that *those* birds ought to know better.

"Danny, you're just the victim of super-coincidence. You're in a bad psychological situation because of your guilt feelings over your drunken skier. As it

happens, at the same time you're involved in what a mathematician would call a random chain, which gives you superficially good methods for rationalizing your troubles."

It sounded reasonable. Danny said, "I guess you're right, Sean. Got any recommendations?"

"I'm no analyst," Sean said. "If you have the dough see a good one. But in the meantime try to realize that you're just feeling guilty about Bill's death and that, realistically, you're not responsible for it. If you don't manage to convince yourself of that—well, sooner or later the random chain is going to break and you'll have to concoct some other rationalization to explain away the truth. Your next rationalization is a cinch to be twice as nutty as your present one."

"I sort of thought I might go nuts over this business," Danny said. He got up. He had only seen Sean order two rounds but somehow he was almost tight.

*Jeepers—this thing really has me down. Two-beer Caiden. What did Bill Emers look like, anyhow?*

"Goodbye," he said. "Thanks, Sean."

**H**E went out, walking carefully. The golden curtain thrown across the door was only sunlight but normality seemed very shaky to him. The world outside was the same world he had left after being fired. Traffic droned along the asphalt. Pedestrians swung past him, heads slightly lowered, intent upon their business. High overhead among the pinnacles of the buildings a pontoon plane cruised, watching the harbor for the Port Authority. It was all very normal.

How normal can you get?

He smiled mirthlessly at himself. All right, Caiden, get over your shock. You made yourself promises about what you'd do if you turned out to have a real prophetic sense. Do you trust your own sanity enough to follow through!

The question was rhetorical. Danny knew of no other way to keep himself eating. He hadn't the talent for writing fiction, and editorial jobs—the only ones for which he was equipped—were tighter this year than they had ever been. His one chance was to sink his few cents in a fantasm.

Shrugging he crossed the street. His

bank was on the ground floor of the building which housed Delta Publishing—Delta did its payroll banking there, so it had saved a good deal of trouble with identification and side trips to stow his small savings cheek to cheek with his ex-boss' He was surprised to find that he had close to two thousand dollars. Well, that ought to serve.

A subway took him to the financial district, an elevator to the brokerage firm which had been the subject of a field trip for Danny's economics class a year before. The junior partner, trained to remember the most insignificant face and name against possible developments, received him with apparent pleasure.

"I want to try a few small transactions," Danny said steadily. "Studying, you understand. I've some money to spare and I think actually entering it on the market would be valuable laboratory work for me."

The broker smiled ruefully. "No sewers where you live?" he said. "The market is tossing like a drunken madman this week. You couldn't have picked a worse time. Personally, Mr. Caiden, I'd advise you just to throw your money off the back of a truck. It's simpler; less mental agony."

"I've no personal interest in the money," Danny insisted. "Win or lose, I want to see what happens and how it happens."

"All right. We'll do our best for you. What do you want to do?"

"Is it too late to sell Wheat short?"

The broker goggled. "Sell it short? My lord, man, you'll lose your pants. Wheat's going up like a rocket, thanks to the war scare. Or do you want to get in on the futures market? If so you're in the wrong place."

"No, I mean stock in International Wheat as a corporation. I've no interest in futures. Give me an option on ten shares at sixteen. You should find plenty of takers. Close with the first one, and sell when it hits sixteen on the downgrade."

"I suppose you know that that sixteen stands for sixteen hundred dollars—it hasn't hit that on the *up*-grade yet. Oh, well, don't remind me again that your purpose is scientific. I'm not used to being so objective. Any special time to be watchful?"

Danny knew that the broker secretly

considered him to be an idiot, but he kept his patience. "Friday, I should say, but it could break at any time."

"All right," the broker said. "Normally I'd have to ask you for security, as I'm sure you know, but I can't see any likelihood that the FEC could get us for this deal. If it works, of course, it'll be a killer but I'll tell you frankly that it won't. Anyhow I'll play it your way."

Silently Danny handed a certified check across the desk. The broker put it into a drawer without looking at it.

"Do you know what's going to happen if it does work out the way you predict?"

Danny shook his head.

"Just pray you don't find out," the broker said. "If you're right you'll find there's worse things than losing your pants." He looked down at his note-pad. "Now, if that's all—"

"That," Danny said, "is just the beginning."

WHILE his courage and his money still lasted Danny located a bookie joint—theoretically they were illegal in the city but actually they were seldom bothered and were easy to find—and settled himself comfortably with a beer and a copy of the day's Racing Form.

Something about him—the clean shirt, maybe—tipped off the regular customers and within five minutes he was approached by as many touts, all with tips directly out of the feedbag. Danny waved them off. This operation was going to be run strictly by feel. He was accepting no information, no matter how good it was, which did not come to him out of his own head.

It took only an hour to make his nerves as jumpy and his shirt as wilted as those of the oldest habitué. At first he had lunged halfway out of his booth every time the bar's phone rang. Now he just flinched a little and clenched his teeth. After a moment's telephone muttering a waiter in a filthy apron put another beer in front of him.

"You sure ain't pickin' 'em today, bub," he said kindly. "Why don't you give over and go back home? The old man'll forgive you."

Danny smiled feebly. "I picked a caboose again, eh? Well, we'll give it one more turn. Let's make it—um—ten to win on High Heart in the next."



"Your funeral. I'll tell Joe."

Danny nursed the beer, and thumbed the money in his jacket pocket. There had still been a fair wad of it when he had left the broker's office. Now there were three bills and a handful of change. The precognitive sense had definitely cut out of operation. Danny wondered if it were gone for good. His head ached.

The phone rang.

"High Heart wins," the waiter said. "Three to one. Mebbe your luck's turned."

"Tell him to put the whole thing on Double Trouble to place."

"Why don't you just take your winnin's?" the waiter said. "Joe don't mind. He's honest when he has a good day."

"Double Trouble to place," Danny snapped. The headache was beginning to get worse.

"All right, all right." The waiter went away. Danny gave up the beer and nursed his head instead. It was localizing now, a tiny, white-hot thread inside his skull. He was beginning to see pinwheels.

"Double Trouble places," the waiter said. "I will keep my big yap shut, mister. What'll it be?"

Danny looked at the form. It was hard even to see the printing, let alone make out what it said. He tried to concentrate.

Abruptly the headache went away. The sudden cessation of pain was almost as dizzying as the pain itself.

"Ugh," he said involuntarily. "Oh—sorry, my head hurt. I'll take Pally to win."

The waiter opened his mouth, seemed to remember his promise, and shut it again. Danny looked at the beer, then pushed it away. The after-effects were still making him a little seasick. He remembered the sensation of deadly fatigue that had struck him down last night after overhearing the strange whispering. Evidently there were plenty of growing pains connected with the development of these wild talents.

The phone rang, and Danny stiffened. If this one paid off, he told himself, he'd go home and take himself a rest. It already seemed two years since last night.

The waiter was standing silently beside the table.

"Well?"

"Flash in the pan," the waiter said. "Joe says he wants you to quit. That'll be ten bucks for the beers."

"Ten bucks?"

On second thought it wasn't surprising. The place was illegal anyhow. The price of the beers probably covered the overhead—the cost of keeping the police looking the other way. He threw his last tenspot on the table and stumbled out.

Precognition had blown a fuse.

## CHAPTER III

### *The Medium*

THE disastrous conclusion of the wild move left Danny in the worst tangle of loose ends he could remember. The sunlight poured almost horizontally between the close-set, massive buildings of the financial district, and anonymous collars padded homeward in a welter of briefcases. The business day was over.

Down by the river the Solid Merit thinned out a little—just enough to admit the El, a few bars and soda fountains, a few tiny shops. Danny wandered, drifting, in his own personal fog of confusion that no sun could penetrate.

He was glumly amused to find a narrow window under the El that was full of dream-books. The little shop had once been a stationery store as the big gold and red sign over it attested. But while it was waiting for a new lessee, it had taken in a medium.

Well—why not? He was no more cast out onto the fringes of sanity than this faker. It might be that her talents were as real and as undependable as his. The undependability would answer a good many questions about the social status of mediums. And there was the possibility that the medium herself might have some answers for Danny. He went in.

There was nothing inside but two chairs, a table and a doorway at the back, which was curtained with a moth-raddled Axminster rug. The floor was bare. Even the table was bare and very battered.

The rug was moved aside and a girl came out. She was small and dark and

somehow rebellious. Her eyes burned sullenly and her mouth was set in an expression of contempt that seemed jarringly incongruous on so young a face.

She was conventionally dressed in a dark tailored suit whose severity, cut to a dressmaker's thinking, was school-marmish. The beauty of the girl burned through it. She was—exquisite. Her eyes met Danny's.

"May I help you?"

Danny looked at her. He had totally forgotten his madness and the things that made it important. He was filled with a tremendous wonder. Finally he remembered to close his mouth.

"Are—are you Mme. Zaza?"

The girl smiled, almost angrily. "No." She scanned Danny frankly her eyes taking him in from crown to toes. Then she shrugged and turned. "I'll fetch her."

She went inside again. Danny tried to marshal his thoughts. After awhile the rug was pulled aside again and a middle-aged woman in shabby robes motioned him in.

There was the usual crystal ball here and dull scarlet hangings. The girl stood at the back of the room. A trumpet, suspended by two threads, hung overhead.

"You seek to know the future?" the medium said in a throaty voice.

"Not exactly. What I think I want is professional advice. I've had some experiences lately that make me think I may be—well, I guess you'd have to call it psychic."

The girl sniffed audibly and the woman shot her an annoyed glance. "My help is for all Lost Ones," she intoned smoothly. "Be seated, please. There are those whose Karma seeks the True Wisdom and those whose Will to Nirvana has become trapped in the Wheel. For those a Guru is needful."

"I don't follow you," Danny said.

"Listen and understand," Mme. Zaza said. She made passes over the crystal globe, which promptly swirled with smoke. "Those whose gift it is to speak a little with the Great Outside know that man has nine souls as the Egyptian mages whispered long ago. Of these the least important is the Shadow. The most important is the Ka. It is possible when the stars are propitious to call the Ka—"

The trumpet gave a premonitory squawk, as if clearing its throat. "Look," Danny said, a little desperately. "Would you mind if I ask the questions? I'm not interested in talking with anybody's Ka. I can see the future a little myself. I want to know how to control it and some other things I seem to be able to do."

The woman lifted her eyes raptly. "It is a great gift, to have the Sight," she said. "It makes one very humble. But it takes much practise to become an Adept."

"Practise? Mental exercises?"

"Not *mental* exercises, young man. The soul or rather the Oversoul—the Ka. It must be sent out from the body into the Great Outside."

"In a trance?"

"That is one way. It is not a thing to be learned in an evening. It will take months, perhaps years. You must return here twice a week. We shall seek the advice of Those Who Have Gone Before and perhaps eventually attempt full contact."

"I haven't that much time."

The woman's interest abruptly went into a deep freeze. "Very well," she purred. "That will be five dollars, please."

Danny looked around. The girl had left sometime during the proceedings. He dug in his pocket and was vaguely surprised to find that he still had five bucks. On second thought, he put it away again and took out two ones.

"For services rendered," he said sardonically.

Mme. Zaza glared but she took the proffered money. It was evident that Danny was anything but her usual kind of customer. She turned her back on him and disappeared behind the scarlet hangings.

The girl was in the bare front room, sitting on the edge of the table and swinging one slim leg idly. She raised one eyebrow at him.

"Get your money's worth?" she said.

"I got what I deserved, anyhow," Danny said, smiling tentatively.

She shrugged. "You looked moderately intelligent. Not the usual sucker. I wondered whether you'd be taken in by all that guff."

Danny was surprised into laughing. "That's a funny way for a medium's apprentice to talk."

"I'm no apprentice. I'm just a prop girl. I blow cigarette smoke into the glass egg and make the trumpet talk and all that. My aunt supplies the patter." She looked at him keenly. "But you didn't answer me. What's brought you here? Or—are you from the cops?"

"No, I'm not. What I told your aunt was the literal truth. Somehow I've developed a couple of abnormal talents that I don't understand and they've already got me into a jam. Under the circumstances I'm willing to get information anywhere I can."

"You won't get it from a medium," the girl said. "You must be having bad dreams."

"No, I'm not," Danny insisted, a little irritated. He wondered if the girl too was going to tell him to visit a psychoanalyst. "Plenty has happened to me in broad daylight. And I expect to have positive proof of one part of it by Friday."

"Balderdash! If you want information you should read Houdini's book on spiritualists. It was ghost-written by Lovecraft but the facts were Houdini's."

Underneath the scorn in her voice there was a faint hint of something else—was it disappointment? Danny couldn't tell. He said carefully, "I don't think it's balderdash and no spiritualist has been playing tricks on me. I may quite possibly be crazy but I'm not a fool."

"Then why don't you stop acting like one?" she said, getting up.

**W**ITHOUT warning, a blinding stab of pain shot through Danny's head. In the foreground of his mind he became vividly, maddeningly conscious of a thousand billion tiny things whirling and whirling in a vast shimmer of movement. The pain increased and the whirling became faster.

The table canted and shot up, striking the ceiling a heavy blow. Plaster showered. The table slid sidewise, like a monstrous spider. A second later one of the chairs teetered hesitantly and leapt after it.

The girl screamed and pressed back against the wall. Danny stood frozen, the whirling of the thousand billion tiny things wrapping his agonized brain in madness.

Then there was a flash of colorless fire, then it was gone. The chair and

table fell back again. One leg of the table splintered and snapped in the middle.

Mme. Zaza ripped the curtain aside. "What the—?" she said hoarsely. "Hey, you, what are you doing? You get out of here before I call the cops. I'm a decent woman and I won't have people wrecking my place. Get out!"

Danny bowed ironically. "Only a little demonstration," he murmured. He went out. The girl watched him go, one hand thrown across her mouth, her eyes wide with fright. Danny grinned at her and flagged a cab. He had discovered a new wild talent.

If there were any wilder ones, he'd just as soon do without them.

He was hardly inside his apartment when the telephone burst into a nerve-shattering outcry. Swearing, Danny crossed the room and snatched it up.

"Hall-o," he snapped.

"Hello, Danny, where have you been? Are you okay?"

"Who wants to—oh, it's you, Sean. Yeah, I'm all right, I guess. I've been downtown, poking around the stock market."

"You *were*?" Sean sounded incredulous. "You had me scared to death. I thought maybe you'd passed out or something—nearly ready to set the cops to looking for you, phoning hospitals and all that. Why don't you stay home a day or so and get some rest?"

Danny didn't know whether to laugh or to feel exasperated. "Look, Sean," he said. "You don't have to take the world on your shoulders on my account. I've got something funny by the tail and I don't mean to let go of it. But I'm satisfied that my sanity's okay and my health too."

"Well, all right," Sean said dubiously. "Let me know if you need any help."

"Sure. You can start right now. Do you remember the name of the guy who collected all that dope about wild talents? The press associations used to mention him all the time."

Sean snorted. "His name was Fort, Charles Fort. There's a cult of Fortean here. Do you want to talk to them?"

"I might," Danny said. "Oh, and another thing—do you happen to know if there's a branch of the Psychic Research Society here?"

"Yes, they're in the phone book. Are you making a collection of fellow-



fruitcakes, Danny? If so, you might as well go out to the University too and throw dice with the parapsychology boys there."

"Good—I'll do that," Danny said. "That's fine, Sean. Any other suggestions?"

"You've heard my other one," Sean said evenly. He sounded, Danny thought, a little disgusted.

"See an analyst, eh?"

"That's it."

THERE was an awkward silence. Danny said, "Okay, Sean, I'll think about it. Thanks a lot. I'll be seeing you."

"So long," Sean said.

For a moment Danny sat in his chair, frowning at nothing. Sean was an odd character—big-hearted, cheerful, absurdly generous, quick to take a share of other people's burdens, quick to take anger at injustices which hardly affected him personally—yet somehow unstable, incalculable, evasive as mercury.

Obviously he'd been a bit offended at Danny's stubborn failure to accept the psychosis-theory. Perhaps also he would like to be in on Danny's next moves—after all, he'd quit his own job in Danny's behalf.

Danny considered calling him back and letting him in on the stock-market deal, then thought better of it. Sean had very little money and there was no point in tormenting him with an opportunity he couldn't take—even if he were inclined to credit it.

Danny grinned ruefully. Come to think of it, he had very little money himself.

It was almost dark. Danny closed the Venetian blinds and put on the desk lamp. At the desk he wrote a letter,

outlining in detail a number of things that hadn't happened yet and specifying when they would happen. This he addressed to himself.

For all he knew the letter might be waste motion. He certainly didn't need any proof for himself. But he might need help—and the postmark on that letter might serve him well later. He sealed it carefully, put it on the table by the door, where he'd be sure to see it tomorrow.

It was queer about the ponies. Surely predicting the outcome of a horse-race was essentially simpler than fore-knowing what a complicated set of factors like the stock market was going to do. Still, he'd hit the horses twice. That might just have been chance and then again—

For the trick of throwing the furniture around he refused to attempt any explanation. There was a reminiscent twinge beneath his forehead. It looked as if he was going to be consuming a lot of aspirin before he was through.

With lax fingers he set the alarm clock. He wondered if he had overlooked a bet, but he was too tired to worry about it. He sank onto the cot with a gasp of exhaustion.

Dimly, in the hot, still air, soundless voices murmured together.

"The tension gathers."

"Danger. I estann danger."

"We are prepared. Let us wait."

"Let us wait."

Danny stirred uneasily. If only there were some meaning assignable to these sinister convocations!

"The walker draws near, my brother."

"Let him beware."

"Let the finder beware."

The voices took up their discussion of  
[Turn page]

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things beyond comprehension, beyond all eavesdropping.

An icy dew crept over Danny's forehead. He sighed, and slumped into death-like sleep.

Danny dreamt. Somewhere in the black night there was a tingling pain and a spinning of a thousand billion tiny things. He felt light and giddy. He turned over slowly and in the dream he seemed to open his eyes and look downward, without surprise, at a deserted lamplit street ten stories below.

The tingling pain and the whirling continued. After awhile he felt a vague alarm that he should be even dreaming such a thing, and willed himself to move.

Gently, he began to drift. The street revolved solemnly. A dark window, his own, came slowly into sight. Still face downward, he began to float back again. The window swallowed him and the dream was over.

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## CHAPTER IV

### *The Invader*

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**D**ANNY stood up as Dr. Todd came out of his office. The parapsychologist was a small, bald, and totally engaging man, quite unlike any professor Danny had ever seen before; and he had been more than helpful, despite Danny's demand that he be tested ahead of the lab's regular schedule.

"Well, Mr. Caiden," the parapsychologist said, "I really don't know what made you think you were especially gifted parapsychologically. We've just codified the results and I'm safe in saying that your psi quotient is quite thoroughly moronic." He sat down and polished his glasses solemnly.

Danny frowned. "No indication at all?"

"None. Of course we can't say definitely until we've tested you over several months—preferably over several years. But the sampling tests show no better than average chance results on the cards and the dice both."

"Oh," Danny said, grinning. "Then I can't really be a moron or it would have been *below* the chance average."

"Don't you believe it," said Todd. "In this kind of work a score consistently

*below* average is just as inexplicable by the laws of chance as a score consistently *above* it. We have trunksful of data indicating strong negative effects on chance, exercised by people with strong psi quotients who were nervous, upset, anxious about their showings and so on."

"I begin to see. Considering my state of interest I should have shown a negative effect?"

"Well, that's what we would have expected had you shown any ability in this business," the parapsychologist said cheerfully. "But you don't, my boy. That is, you're no good at the cards or the dice. Don't forget that our experimental techniques explore only the most rudimentary kind of exercise of the psi faculty. You may be in the position of a master chef being asked to make a shapely mud pie. You might be able to do it—and then again—"

"That's letting me down easy," Danny said. "But maybe you're right. Is there any more?"

"Oh, certainly. This is just a preamble. We've got positive results too. I only wanted to prepare you for the fact that we can't make head or tail of them. The encephalograms, for instance. Your alpha pattern—the normal wave output of your brain at rest—is totally out of the ordinary. It follows the general modified sine curve that the usual alpha pattern does but there is a regular series of secondary modulations that are quite new to me."

"But you don't know what it means?"

"I can guess," Todd said cautiously. "Remember that the alpha pattern represents the activity of the brain *at rest*. As soon as any active thinking begins the wave contorts into bow-knots. Tentatively we can say that at least one other part of your brain which nobody uses, or at least nobody uses except when thinking, is in continuous operation. To carry the guess a little further we'll say that it may be located in the unknown four-fifths of your brain—at least, it doesn't conform to any of the sensory wave responses that we know. We may be able to confirm that when the X-rays come through. We have a few crude methods for recognizing subcortical activity, though we seldom find it."

Danny rubbed his head ruefully. "It hurts when it's working, I'll tell you that."



"Naturally. You're opening up new synapses that have never been used before and that, for all we know, may still be in a very primitive state. It should be easier each time. But that's not what we want to get at, basically.

"Those individual synapses are just parts of two very general functions. ESP, extra-sensory perception, is the most commonly known one but PK, psychokinesis, is just as important. These are the fundamental abilities and the centers we have to locate. All the side effects, such as precognition and telepathy, bear the same relationship to the basic psi faculties that symptoms have to causes."

He broke off as an assistant entered the room quietly, carrying with him a small stack of films. "Ah," Todd said. "Let's take a look."

Danny took a look over Todd's shoulder. "Those don't look like any X-rays I ever saw before."

Todd chuckled. "They aren't," he said. "But we call them X-rays for convenience since this process hasn't a name of its own yet. The shot we gave you was radio-ekacesium. It has an affinity for the subcortical Golgi bodies just as radio-iodine has an affinity for the cells of the thyroid gland. This set here was made after the second shot, which contained radio-silver—strictly cortical, but we can't afford to miss any bets."

**H**E held the plates up to the lamp-shade one by one. Danny watched anxiously.

"There's some concentration here," Todd muttered. "Hard to tell how it's shaping up yet. But we'll get it. Supposing you come back tomorrow, Danny. I've got a little book-work to do. Then we'll make a fresh attack."

"Do you think there's any hope?"

"Hope?" the parapsychologist exploded. "Great jumping grasshoppers, man, you bring me the first chance we've ever had to observe this What-Is-It we call the psi faculty directly and you ask me if there's any hope! Skin out of here before I crown you."

Danny left, his head still full of the squares, stars, crosses, wavy lines and circles on Dr. Todd's test cards. The results were exciting, yet disappointingly inconclusive. Well, that was to be expected. It was hard to imagine any normal everyday agency, even one as

unorthodox as the parapsychology labs, coming to grips with the outlandish Unknowns that were invading Danny's mind. He was lucky Todd had got as far as he had. The man's confidence, at least, was infectious.

The Forteanans were even less helpful, though friendly. The local branch of the Fortean Society had only a post-office box address; when he finally found them, it was by way of *Who's Who*. Their local leader turned out to be Cartier Taylor, a popular author, a man who had written so many colorful and occasionally acute thrillers that even Danny had heard of him. Indeed, the Fortean group seemed to be crawling with writers of various calibres, most of whom were more impressed by their Master's brilliant writing style than with his disordered metaphysical theories.

Taylor was more than willing to load Danny up with half a hundred reports of wild talents of every conceivable kind. He had bins of them. But nothing he had to offer in the way of basic theories to account for them seemed better than idiotic. Indeed, he seemed to have a special bias for the idiotic.

He viewed scientists-in-the-mass as a kind of priesthood and scientific method as a new form of mumbo-jumbo. It made him partial to astrology, hollow-earth notions, lemuria, pyramidology, Vedanta, black magic, Theosophy, personal devils and a long list of similar asininities—the more asinine the better.

Fort himself made exciting reading. Danny could see why writers loved him. He wrote in a continuous display of verbal fireworks and his attitude toward his world was a cosmic irony midway between Heine's epigrams and the belly-laughes of the Ritz Brothers.

But his explanations for the things he had observed and collated were deliberately outrageous. Every now and then Danny found in the Fort books a glimmering trail toward something useful—and every time Fort took the data and stood them on their heads.

A scientist with a lot of patience might have made something of Fort's book on wild talents. But for Danny, with no scientific training and a desperate need to know *now* what it was all about, there was nothing in it but an assurance that a lot of people had been in the same fix.

That left only the Psychic Research Society. Danny had no idea what he expected to find there—a group of mediums perhaps, struggling to make their trade respectable—a quasi-religious organization trying to prove survival after death.

He was totally unprepared to meet Sir Lewis Carter. He recognized the internationally famous astrophysicist at once. His mismatched trousers and jacket, his calabash pipe with the meerschaum top, were almost as familiar as trade-marks.

"Don't tell me you're the boss of this outfit, sir?" Danny said.

Sir Lewis inclined his iron-gray head. "More or less, young fella. What's your problem?"

Danny gave him a quick sketch, leaving out the flatly incredible parts. It was substantially the same story he had told Sean. Sir Lewis made no comment until he was through.

"Have you seen anybody else about this?" he asked.

"Just about everybody," Danny said. "Even the Fortean and the Rhine people at the University."

**SIR LEWIS** dismissed the Rhine people with a wave of his pipe. "You got nothing out of that crowd, I'll warrant. They can't seem to realize that you can't handle things as delicate as psychic manifestations as if they were performing dogs. They have their own laws and they're pretty stubborn about failing to show up except under special conditions."

"That seems reasonable to me," Danny said. "What I want to know mainly is how to control these—well, these powers. The way they keep popping up is uncomfortable. They've lost me my job and I suspect I'll be in worse trouble before long."

And *that*, Danny thought, ought to win a medal for understatement!

"I quite sympathize," Sir Lewis said gravely. "What I suggest is that you stay here with us for observation. We can make you quite comfortable and have plenty of opportunity to study these manifestations as they occur. We have funds for that purpose so you needn't worry about a job for awhile, and you'll be—so to speak—off the street and thus out of any serious danger."

"That's generous of you," Danny said. "But unfortunately I have so many things to keep track of that I can't risk it right now. Maybe later."

"Suit yourself," Sir Lewis said. "Let me see, I have your address. I'll send you some literature; you may find something useful there."

"Thanks," Danny said again.

He scanned a late paper on the subway. The indictment of International Wheat had made page one and the market had already slid three points. Dow-Jones experts were already worrying learnedly about a "penetration"—a break through the previous low point which usually indicated a general slump and a bearish market, perhaps even a crash.

Proof! Danny was glad he'd mailed that letter. It was too late for him to pick up his earnings today but they'd come in handy Monday. But why hadn't it worked at the races? It worried him.

There was a small knot of people, mostly women, gathered in the apartment lobby when Danny arrived. One of them, a portly well-dressed man Danny recognized in a double-take as his landlord, detached himself from the group and approached him.

"Mr. Caiden, might I speak to you for a moment privately?"

"Certainly," Danny said.

"I'm afraid I'm going to have to ask you to leave," the landlord said the moment they were in the stairwell. "I myself regard myself as a broadminded man, but most of my tenants are middle class and rather censorious and do not regard the maintenance of young women in bachelor apartments as an asset to the community."

It took Danny a moment to get the pompous sentence unwound. "Young women?" he echoed feebly.

"I was called here this afternoon by Mrs. Emerson, of Eight-A, anent a disturbance centering around your apartment," the landlord said. "As I have the story, and after eliminating points of conflict between the various versions, Mrs. Emerson observed a young lady leave a taxicab in front of the building and enter it."

"Mrs. Emerson then heard your doorbell ring, after which—some minutes after—the young lady was heard mounting the stairs and admitting herself to your rooms with a key." He

took a deep breath and belly-whopped into another sentence.

"Later on the superintendent, who had been called out by phone to repair a leak—a *nonexistent* leak, I might add—reported a passkey missing. He attempted to inquire after it and was told by Mrs. Emerson—"

Danny had heard enough. He bounded up the stairs, leaving the landlord floundering in a welter of dependent clauses. Unaccountably his hand trembled, making the point of the key clatter against the lock.

The girl was there all right. Danny slammed the door and bolted it. A moment later the portly pompous ass outside was pounding on the panel.

"Twenty-four hours!" he shouted, syntax forgotten in his rage at being abandoned and shut out. "An eviction notice! The law! Respectable house! Won't have it! Do you hear?"

"Yah," Danny said. "I'll leave. Beat it."

He glared at the girl, who sat in his favorite armchair, smoking one of the emperor-sized cigarettes he favored when he was alone. The glass tube it had come in lay beside her on the telephone table. She eyed Danny with cool amusement.

"What are you doing here?" he growled.

"Waiting for you," she said. "And in case you're wondering how I knew where you lived I heard you give your address to the cabby when you left my aunt's place."

"What do you want of me? You've lost me my apartment and I'm in enough trouble already."

"With your talents," she said sweetly, "I'm sure you could conjure another one up out of nothing. And I'm going to be on the spot to see it done too. By the way, my name's Marla."

"I'm Danny Caiden," he said automatically. Then, "Like fun you are! You're going to get out of here pronto or I'll throw you out!"

"No, you won't," Marla said. "I'll scream. You'll go to jail. That wouldn't be nice."

**H**E glared at her. "What is this—a shakedown? I haven't any money."

"I don't want your money. What you've got is worth more to me than money. I want to know how that trick

of yours was pulled—the way you threw the table and chair around. You did it without any previous preparation and in a place you'd never seen before. Nothing in Houdini's book matches that. It'll mow the suckers down in droves. What else can you do?"

"If I stick my tongue out a certain way," Danny said sardonically, "I can make a noise like a turtle-dove." He demonstrated. "As for pitching your furniture around I'm beating my brains out trying to find out for myself how I do it. When I do I'll practise by zipping your zipper up and down and tying granny knots in your shoelaces. Now will you go?"

"Nope. I'm sticking until I find out how it's done. You're a very good liar, Danny, but I've seen better and I don't believe in spirits."

Danny threw himself into the rocking chair, which he hated, and put his head in his hands. "What about your aunt?" he said finally.

"That old harridan?" Marla laughed scornfully. "She'll never get any farther than she's got now. She just uses the same old routines and won't learn anything. I'm different. I know a brand new line when I see one and I don't mean to let go of it." She scanned Danny again, even more critically. "Even if I have to marry it."

Danny started up again, then subsided with a groan. If—

Someone knocked sharply. "Go 'way," Danny growled. "I told you I'd leave. Blow."

There was a short, puzzled silence. Then the knock came again. Evidently it wasn't the landlord this time. Cautiously Danny shot back the bolt and peered out.

The knocker wore a gray business suit and a gray fedora, and looked a little like an inefficient C. P. A. He said, "Mr. Caiden?"

"That's me."

"F.B.I.," the knocker said, flopping his wallet open under Danny's nose. The card in the wallet said the same thing. Silently Danny stepped back to let him in.

"What's the matter? Don't tell me the landlord's invoking the Mann Act now!"

Marla giggled immodestly.

"No, Mr. Caiden, I'm here on behalf of the Securities Exchange Commission.



I expect you were too young to notice the twenty-nine crash, but we're out to see that it doesn't happen again. Smart operators who are out to make it happen again get our deep-freeze treatment but quick."

"What makes you think I'm out to do that?" Danny asked carefully.

"What you pulled today was suggestive to say the least," the F.B.I. man said. He sat down calmly in the rocking chair and crossed his knees. He didn't bother to take off his hat. It looked as if it had grown there.

"Catching Wheat short on a completely secret indictment is no mean trick even for a seasoned investor, let alone someone who'd never touched the market before. Even your broker admitted he'd never heard of you."

"Circumstantial," Danny said. "Have I committed a crime?"

The F.B.I. man laughed gently. "Smart operators rarely commit overt crimes," he said. "Sometimes we even have to tag them for violation of the Sherman Act. When we can't do that we subpoena them as material witnesses."

"To what?"

"Why, violation of the Sherman Act. Weren't you listening?"

Danny began to get it. Certainly the fact that the market had not fallen until the indictment had been announced officially would indicate that the Attorney General's office had succeeded in keeping it a secret right up until that time.

The further fact that the drop had found one investor—himself—already undercutting the stock to the exact value of its depreciation would smell to the rest of the market and to the F.B.I. like deliberate panicking under orders from Wheat itself. Similar tactics had been used in the Zaharof and Insull scandals.

But Danny, unlike Samuel Insull, wasn't an old and repentant exile and couldn't expect to get the sob-sister treatment from the papers. If it turned out that Wheat had actually planned any market manipulation, Danny would be flayed alive by the curb-market wolves. Precognition, it would appear, had blown another fuse.

"Are you arresting me, then?" he said dully.

"Temporarily. You've been subpoe-

naed by a Grand Jury investigating collusion toward price-fixing, violation of FEC and SEC regulations and possible violations of the Sherman Act as amended. You're not technically arrested but simply detained for questioning."

"What does that mean?"

"It means that the Grand Jury will want to be able to reach you at this address. You'll be allowed to retain counsel, and to live here until you're called. That will be within a few days, so make sure you don't leave the building. If you do, you'll wind up in a cell. We've already taken steps toward collecting your today's earnings as bond."

DANNY was speechless. The F.B.I. man stood up and looked at him, not unkindly. "It's not my function to call you guilty or innocent, Mr. Caiden," he said. "You look all right. If you are, your best bet is to stay put. If you break bond the jury will take that as evidence of your guilt."

"Stick around and fight it out. If you're on the up-and-up you'll come out all right. We'll give you all the legal help we can. Frankly, I don't see how a guy your age could be the evil genius the SEC thinks you are—you simply couldn't have accumulated enough experience. Stick tight and you'll be cleared."

"Thanks," Danny said numbly.

He had been saying, "Thanks," for the most varied favors lately. The door slammed. Marla got up and walked to the window and Danny gratefully reclaimed the big chair.

It began to seem that he had spent his whole life sitting in that chair, wondering what to do next. Right now that chair was as good as a cul-de-sac. He couldn't leave and he couldn't stay.

Possibly the landlord would consider the F.B.I.'s reasons stronger than his—no, that way led to still more whispering among the neighbors.

"Did you hear? That Mr. Caiden in Four-D had a woman in his apartment and now the F.B.I.'s after him! And such a nice looking young man, too!"

Whispers like that had a way of attracting newspapermen—indeed, any leak from the F.B.I. itself would bring a horde of newsmen down upon him.

He couldn't stay. He had to see Todd, tomorrow. Also, he couldn't leave. The Grand Jury had forbidden it. And the

SEC had impounded his earnings.

He felt like a rat in a maze, full of the desperation that leads inevitably to nervous collapse—drained of vitality by the strain of coping with the super-normal and its unpredictable effect upon normality.

The psi faculty was growing in him, growing like any other exercised talent, with practise. Thus far, even Mme. Zaza had been right. But Danny remembered the cut speech of a violin teacher who'd given him up in disgust twenty years ago.

"Practise makes perfect," he had said. "But it can also cut your throat."

All proverbs are Aristotelian; they make no sense without a modifying second clause. The violin teacher had had the goods. There was no point in practising these wild talents if they were to lead only to a continuous chain of catastrophes.

Marla turned and looked down at him, and there was something oddly gentle in her regard. "You *are* in a jam, aren't you?" she said. "It looks like Marla has backed the wrong horse."

"The window is still open," Danny said listlessly. "Go get your bet back and go home."

She shook her head. "You can't get rid of me now, Danny. I've even got a good moral reason for staying, now that I see you're really in trouble. I like long odds. When they pay off, they pay like crazy."

"Um," Danny said. "I don't warm to all this horse imagery. I've had my—"

He shut his mouth with an audible snap and sat up. "Wait a minute. Todd said that Rhine had shown increases of accuracy with the numbers of things handled."

"What? I don't get it—"

"You don't have to. You're staying? All right, you can be useful. How much money do you have?"

She stiffened with mock alarm. "Wait a minute, Junior. You're talking to Marla now. She's a smart girl, remember? No ponies—that's flat."

He hardly heard her. "Large numbers of identical objects, that's the ticket. Not horses—they're all unique combinations. But dollar bills. We won't fuss with the actual outcome of races—that's a stiff problem in vector analysis, whether you go about it parapsychologically or normally. We can stick

to the flow of the money across the betting counters."

"You talk nonsense."

"I do?" He grinned ironically at her. "You wanted to learn how I work, didn't you? Well, here's your chance." He dug out all his remaining bills and gave them to her. "Stick that in your purse if you've got one. Add whatever you have to it. We won't need the racing forms or the names of individual horses for this trick. Let's see—"

HE stopped and stared blindly out the window, remembering that spinning of the minute billions over the surfaces of his brain. A second later the memory had merged with reality and his head was buzzing with pain. He didn't care. He groped for a pencil, hit the washstand instead and latched onto a piece of soap. With a corner of this he scribbled figures on the window-pane.

"Pay your bets in that order on any horses that show odd-chains in this order. When you get a return of eighteen to one on the fourth bet you made repeat the sixth bet twice. Then the first bet, then wait for a two-to-one return on the ninth bet and—"

The girl had found the pencil, moistened the end of it and was rubbing the figure-chain on the window into the fabric of her handkerchief. "I'm not a moron, I can follow the numbers. I don't know why I'm doing this, you understand, but it's a cinch it isn't love."

She stuffed Danny's money into her purse and slipped out the door. Briefly Danny wondered if he'd ever see her again, decided that the present take was too small to satisfy her and forgot her at once in pawing frantically through the library books he had brought home.

Tyrrell's *Science and Psychical Phenomena* he discarded at once. It was jammed with important information but little of it was germane to the immediate problem. The new Rhine book he had already read and besides he could depend upon Todd to handle that end of the business. Littleton's *Our Superconscious Mind* gave him one case history which he read with fanatic intensity and several more which applied marginally to what he was seeking.

It was Dunne's *Experiment With Time* which finally put him on the track.

He nearly turned a handspring when he hit the crucial chapter, for he had come near to missing the work altogether. Only the fact that he had seen a discussion of Dunne in Priestly's popular *Midnight on the Desert* had put him onto the man at all.

The last two books were both by Ouspenskii—the *Tertium Organum* and *A New Model of the Universe*. He had come to these too by a roundabout and utterly unscientific way. A book review of T. S. Eliot's *Four Quartets* had mentioned the latter and curiosity had later impelled him to buy the first. Now both were paying off.

He snatched up the phone and nearly yelled Todd's home phone number at the operator. After a while Todd's voice answered, very sleepily. A second later his voice was crackling with excitement.

"Wait a minute, Danny, take it slowly. You read all those books just in the last hour?"

"No, not all of them, just most of them and anyhow I didn't read them, I just looked through them. But I'm sure I've got it."

"So am I. I know those books well. If you got all that out in an hour you must have looked through them as thoroughly as a thousand-volt X-ray. Does your head ache?"

"Why—yes. Pretty badly, now that you mention it."

Todd chuckled unsympathetically. "I thought so. Another subcortical area come into play. You didn't read those books at all—you printed their contents on your memory by ESP, and didn't even know you were doing it. All right, Danny, I'll be over at once. Have you got a pencil handy?"

Danny made a brief frantic search of his pockets, then remembered that Marla had taken the pencil with her. He took the phone over to the dark window and picked up the scrap of soap.

"Shoot."

Rapidly Todd read off a list of equipment. Danny scrawled it on the panes. "I'll bring the rest. Your horse trick should pay off. If it doesn't I'll send a truck to the University and ship their stuff in. But if we can buy it new it'll help."

"Heisenberg?"

"Exactly. In physics the equipment effects the results. In parapsysics the

experimenter affects the equipment. Let's not waste time talking about it on the phone, Danny—we may have the whole answer before morning!"

## CHAPTER V

### *The Serial Universe*

DANNY put the phone back into its cradle and rifled his desk for another pencil. It didn't seem to contain another but he did find a 27c ball-point pen which he had previously decided would write *only* under water. He had just finished copying the list off the windowpanes when the door was kicked open and Marla came in. Her pocket-book bulged like a pregnant sow and the pockets of her dress made bumps all over her.

"I'm sold," she said. "And without a racetrack open anywhere in this part of the country too. I just put the money down and followed your figures and—"

"Never mind the details. I've got another job for you. Take all the dough out again to Otto Meiner's."

"What's that?"

"It's a scientific supply house at the corner of Edgerton and Fifth across the river. They'll be closed, but they have an emergency bell. Tell them Dr. Todd from the University sent you. His secretary will confirm it. When they let you in buy everything on this list."

Marla glared at him, her bosom taxing the severe tailored jacket. "Do you mean to send me across the river at this time of night?" she demanded. "Don't you know there's only one ferry running?"

"Certainly I know it," Danny snapped. "I didn't ask you here in the first place. If you want to learn anything from me you'll earn it. Oh—and leave me about half of that bankroll. You won't need any more."

"Scrooge! All right—here. If I catch my death of cold I'll haunt you."

She went out again. This time Danny had nothing to do but sit and sweat it out. His researches with the books had reached the limits of his knowledge. Now it was up to Todd to make it work.

The long waiting period gave him plenty of time to remember that he



hadn't eaten since breakfast. Drug stores had all been closed for half an hour but after five phone calls he found a bar that was willing to send up half a dozen liverwurst-on-ryes. Then he sat down in the big chair again and chewed distractedly on the balky pen.

Todd, the equipment and the sandwiches all arrived at once. The equipment arrived in a two-and-a-half-ton truck with Marla perched on its rear, swinging her shapely legs over the tailgate. Todd watched her from the soap-scrawled window while Danny doled out his silver to the boy from the bar.

"Is that your girl, Danny? She's a pretty thing."

"I never saw her before today," Danny said, chewing busily. "But I can safely say that she's become attached to me. She thinks I'm a charlatan and wants to find out how I do it."

Todd smiled. "Well, with luck she'll find out—providing she can understand it. Hello, here's the first instalment." The driver stood patiently while Todd read the markings on the crate. "That's the resonator. Better put that on the bed. I want to assemble it in a chain of steps and there won't be enough room on the table."

Marla came in with a smaller package, breathing heavily and glaring bloody murder at Danny. "What'll I do with this?"

"Put it on the desk for the moment. Marla, this is Dr. Todd from the University. Relax and have a sandwich. We're going to be up all night."

"I'm already resigned to it," the girl sighed. She watched interestedly while Todd and Danny unpacked the encephalograph. A small transformer was plugged into a wall socket and from it Todd skillfully rigged a bewildering network of step-down leads.

The last item in from the truck was the biggest—an operating chair, such as surgeons use for working on the brain. It looked very much like a barber's chair—or did until Todd rigged the encephalograph to it. Rewiring the standard lie-detector took longer and no police technician would have recognized it when Todd was through with it.

"That'll do for a start," Todd said finally. "Now, before we start, Danny, let's get the record straight on this telekinetic trick. Tell me just what the sensation was."

Danny explained as well as he could the whirling sensation. When he got to the levitation of the table Todd's eyes sparkled.

"That's the Blackett effect," he said. "You cut down the gravitic moment of the individual atoms."

"Then the whirling things—"

"Electrons. I think we won't need to use a bit of this equipment to give you full conscious control of PK at least. All we need to do is to implant conscious understanding of the physical process in your cortex and the last connection will be opened." He scribbled rapidly and shoved the paper under Danny's nose. "Here, look at this."

The paper said:  $G = (2CP/BU)^2$ . Danny looked at it.

"I don't feel any different," he confessed.

"Do you know what magnetic moment is?"

Danny tried to remember his college physics. "Let's see—it's the product of the strength of a magnetic charge times the distance between the poles."

"Right. That's  $P$  in our equation.  $U$  stands for angular momentum, and  $G$  and  $C$  are the usual universal constants. Now if you'll remember that every electron is a tiny electromagnet and figure  $B$  is an uncertainty correction amounting to about point twenty-five—"

**S**UDDENLY Danny saw it. The figures, really, didn't matter. It was the relationship that counted.

Todd, watching him closely, suggested, "Move something."

The cake of soap, which had been leading a remarkably adventurous life during the past three hours, shot off the windowsill, smashed against the opposite wall and dropped into the innards of the resonator on the bed. Part of it remained sticking to the wallpaper.

"Take it easy," Todd said, laughing. "You'll gain control with practise."

"What I still don't understand," Danny said, "is how I do it. Just understanding the process can't be enough—it takes an actual expenditure of energy to move something, whether you use PK or just pick it up and give it the old-fashioned heave-ho."

"You're expending energy, Danny," Todd said calmly. "And plenty of it. PK is one of the highest forms of ac-

tivity of the human brain and you'll find it extremely tiring if you keep at it for long stretches. The electrons you're affecting are your own, in the cells of your brain. You project the resultant field onto the object you want to move."

Danny turned his head suddenly and looked at Marla. She was standing by the door watching him with wide eyes. She had one fist crammed in her mouth.

"What's the matter, Marla? Isn't this what you wanted to see? Does it scare you?"

"You bet it does," she said. "It just hit me that you weren't kidding when you said you didn't fake this business. I don't like it. It isn't natural."

"Certainly it's natural," Todd scoffed. "All right, Danny, climb in the chair and we'll get started on ESP. I warn you that will be harder because we've got good reason to suppose that it's partly nonphysical." He filled a syringe from a rubber-capped vial. "Roll up your sleeve and we'll get going."

"What are you going to do?" Marla said warily.

"Dunne's idea," Todd said, smearing Danny's temples with gray salve, "is that the activity of the psi mechanism is that of an infinitely overlapping group of Fourier functions in which the nervous impulses play the part of dynamical variables."

"Hey, take it easy. Give it to me in English."

Danny smiled. "In essence, my notion is that the unused part of the brain doesn't share the one-way time orientation that governs the cerebral cortex," he explained.

"That way of looking at time is just a habit really since all events—past and future—exist together. They don't just flash into being in some mythical present and then flash out of existence again when present becomes past. I think the psi mechanism senses that and can act upon it directly, while the cortex is blinded to it by pre-scientific ways of looking at things."

The girl thought about it. "If I make any sense out of that at all," she said finally, "you're saying that all events are predestined."

"That's the cortical way of looking at it. If you're going to insist on thinking in those terms, then I suppose you'll have to call it predestination. But it's

not a rigid, linear series like beads on a string.

"Dunne envisages an infinite series of overlapping event levels, every one of them keyed by some sort of decision-point. Plenty of room for operation of free will, you see, if you have to be comforted by such an essentially meaningless concept."

"Ouch!" Marla said ruefully. "I can't help it if I'm a layman. Is it all right if I think of it as a big pile of movie films, with the frames all overlapping each other a little bit and the leading character shifting from picture to picture at will?"

"A very good way to think of it," Todd said gravely, snapping the encephalograph electrodes into the gray goo. "I'm none too sure of your Poisson-brackets anyhow, Danny. I think we might better make the assumption that your impulse-groups correspond to Heisenberg's 'probability packets.' Marla's analogy would apply better there too."

"Whatever you like," Danny agreed. "That's what we've got to find out. What Todd wants to do, Marla, is to localize the psi centers in the brain and put them under conscious control. That's what all this apparatus is for."

The encephalograph hummed softly. On a slowly revolving drum a kymograph stylus wrote a complicated trace. Todd looked at it critically.

"What are you doing, trying to compose a limerick?" he asked. "Relax, Danny, I can't make anything out of that."

Danny closed his eyes and tried to think of nothing at all. Since he was conscious he could not, of course, succeed completely. But he managed to empty his mind of everything but fugitive images over which he had no control.

"That's better," Todd said. "Just hold that a minute. All right. Now shift that chunk of soap again. No, no, don't visualize it, I don't want the trace messed up with sub-optical activity. Just lift the soap."

"How can I without visualizing it?"

"You don't have to visualize it. Your psi mechanism is in direct physical contact with it. Now relax again. All right, hoist!"

Danny hoisted. Todd grunted with satisfaction and Danny's eyes popped

open involuntarily. The soap dropped back again.

Todd was holding an X-ray plate just over his forehead.

"Don't be impatient. I want to get plates from the side too."

He put Danny through the procedure again, then slipped the plates into the sink and covered them with a scatter-rug.

"You haven't any fluid in your developing bath," Marla said.

"I don't need fluid. There's an ammonia-soaked sponge in there. Those are xerograms—dry-plates." Todd strapped the converted lie-detector into position.

"Now, Marla, let's be tee-totally quiet for an hour or so. Every word you say registers on Danny's mind and makes the kymograph wiggle and we don't need that kind of data. This is the crucial stage."

THE hour stretched into two, then to three. Marla was frankly and unequivocally asleep in the armchair. Danny, his conscious mind hypnotized into near-trance by the deliberate monotony of Todd's methods, slumped in the surgical chair and watched dully while the scientist studied the latest of the interminable series of plates.

On the one that Danny could see there was a pattern that looked like the bursting of a skyrocket. It seemed to satisfy Todd profoundly. There was an air of sternly suppressed excitement about him.

"Danny."

"Um?"

"The Fourier idea was right after all. It looks to me as if the whole center is in operation now. But there still aren't any impulse traces through to the cortex. I want you to see how much of an event-series you can pick up, say, five minutes from now. Anything at all—my movements in the room or anything that might be going on in the street."

"Aw ri—" Danny struggled to get out of his semi-stupor. Todd's glance shot to the kymograph drum. "Don't" he said sharply. "Stay relaxed. I want your cortex cut out as far as possible."

Danny slumped obediently. After a moment there were dim shapes superimposed upon the familiar geography of the room.

"Getting something. No movement."

"Probably just one 'frame,' to use

Marla's term. See if you can spread the reference-point."

Without conscious volition the dim figures began to move. At the same time a section of the street outside, including a sizable section of the nine apartments below, became directly sensible. It was an odd feeling for which no words existed.

He felt a vague sense of alarm.

"I'm estanning—" he said automatically.

"You're what?"

"I didn't mean that. Something I don't like here, Dr. Todd. There are more people in the room than I can account for and there's a car downstairs with two more in it. Some kind of a fracas."

Todd watched the converted lie-detector like a spectacled hawk. "Go on."

"I've lost it. No, wait—a couple of these birds have guns. There it goes again." He opened his eyes and sat forward in the chair, fully awake now. "What do you make of that?"

"Nothing I like," Todd said grimly. "Any way of localizing the time?"

"Marla will still be here. So will you, I think. But I couldn't get it clearly. Identities were all shuffled."

Below, a car purred to a stop at the curb. With a quick sweep of his hand, Todd yanked the light cord from its socket, plunging the room into darkness. Danny pulled the electrodes from his head and wrists and went over to the window.

"Already," he murmured. "See—that first bird's got a Tommy gun. Something tells me my manipulations have blown the all-time fuse. I wish I had a gun."

Todd shook Marla.

"Get up, girl. Quick. Danny, show her where your closet is and make her hide in it."

"What's up?" the girl said sleepily.

"Trouble," Danny said. "Come over here, Marla, and get in. Not a peep out of you no matter what you hear."

The doorbell rang, the sharp sound making them all jump. "Let 'em get in by themselves," Danny said grimly. "Hadn't we better make some of this equipment safe?"

"Too late and not necessary," Todd summarized tersely. "Damn! Another five minutes and we'd have had the whole story on record. Let them stumble over the stuff and tangle in the spaghetti-



ti." There were fumbling sounds. In the dim glow, Danny could see the scientist hefting the small heavy transformer. A blow from a corner of that could crack the toughest skull. Danny grinned, picked up a chair and stationed himself beside the door.

"Caiden?" a quiet, rasping voice said. Danny didn't answer. "We know you're in there. We mean business. Open up or we'll spray the room."

**D**ANNY hesitated. He had no idea what the men outside wanted with him; but he knew he didn't dare take any chances. Machine-gun bullets would surely go through the closet door as well—it was directly in the line of fire.

"All right," he said. "Hold on."

He unlocked the door and swung it open.

A powerful flashlight beam flooded the room, catching Todd flatfooted.

"Hello, grampa. Give us some light here and snap to it."

Grudgingly Todd plugged the light cord back in. Three men came in, two of them prodding Danny back and taking stations where they could cover the whole room. One of them was the waiter Danny had seen in the bookie joint.

"Well, well," the waiter said. "This guy was in Joe's place yesterday, boss. He must of been casing us."

"Where's the girl?" the man with the flashlight said.

"What girl?"

"Your runner. We traced her here after that mess she made of the parimutuels tonight."

"She's gone home," Danny said. "She's just a messenger."

The man with the flashlight considered it, his eyes roving over the scattered equipment.

After a moment he bent curiously over the plates on the table.

At the same moment Todd threw the transformer and flung himself flat on the floor. A Tommy gun clattered on the boards, its owner toppling like a felled tree.

Danny kicked the man with the flashlight expertly and with great force and threw himself in a flying tackle at the remaining gunman.

There was a crash of glass as the headman lunged, flailing, into the en-

cephalograph and sat down in its ruins. Danny had no chance to keep track of him. The man he had tackled, unable to shoot, was clubbing him furiously with the butt of the gun. Danny heaved and brought him down.

There was a rush of heavy shoes behind him and then somebody grabbed his arms and threw him away. At least three more men had come in, evidently from posts outside the door. Danny belatedly threw the newly-mastered PK into gear and sent the fallen gun hurtling straight at the nearest one.

The man's mouth dropped open. He was too startled to duck. Todd writhed in the grip of a gorilla at least twice his size, kicking him hard in the shins. The man winced, but held on, swearing luridly. A moment later and there were two of them kneeling on Danny. A muzzle ground into the small of his back.

He got his water tumbler and a heavy dictionary into action.

"Quit throwin' stuff around," the rasping voice panted. "I don't care how you do it but the next thing takes off by itself I'll blow you in two."

The sentence was scrambled but its meaning was all too clear. Danny subsided obediently and the assorted objects he had had whistling around the room dropped inertly to the floor.

"What'll we do with the old geezer, boss?"

"Truss him up and stick him in the closet. This guy's the smart joker that's been the cause of the trouble. Use some of that there wire."

The gorilla wound Todd with wire until he resembled an electronic age mummy. When he opened the closet door, Danny's umbrella slammed over his head.

"Cripes, another one! Grab her, Tooey. So you didn't go home after all, sister? Wire her up, Tooey."

Bound and gagged, Todd and Marla were stood in opposite corners of the closet and the door closed in their faces. Danny tried to project some kind of reassurance but any telepathic bump he might have had obstinately refused to function.

"All right, let's beat it. People live in these kind of joints is awful nosey—one of 'em'll of called the cops by now."

Something nudged Danny's ribs. "March."

## CHAPTER VI

*Tether's End*

**F**OR the first twenty minutes Danny concentrated carefully upon marking the course the heavy car took through the early morning darkness. The few scraps of conversation exchanged by his captors only served to confirm the first impression.

They were hired hoods, most of them, under the leadership of small-time gamblers attached to a syndicate. No purpose would be served by learning to tell these small fry apart. The identity of the man he was being taken to see might be a matter of more importance.

The car had just swung onto the upper reaches of the Kingsway Bridge when Danny realized that no attempt was being made to confuse him. Thus far he could plot their course from the apartment as easily as if he had left a chalk-line. They had followed the quickest and most direct route out of the city, the same one the Chamber of Commerce recommended to visitors. The lesson was plain. They didn't expect Danny to come back.

Five minutes away from the bridge the car shot up a long gravel drive and pulled up. The house that was their destination was long and low and could have been anything from a roadhouse to a luxurious country home. Danny was hustled around to the back without being given a chance to see the main building.

"Here he is, chief," the man called Tooeey said. Danny was shoved roughly into a small, thickly carpeted room,

most of which was taken up by a heavy glass-topped desk. The man behind the desk was expensively dressed but unimpressive. Danny had never seen him before.

"Shut the door, Tooeey. What's your name, you?"

"Caiden. What's yours?"

"I'm asking the questions," the man behind the desk said. "Tooeey, are you sure this is the guy?"

"Yeah. We found the girl tha' passed the money hidin' in his closet. And him and an old geezer tried to jump us."

"The way you guys came at them that wouldn't prove nothing."

"Murph says the guy was in Joe's this afternoon, casing the joint," Tooeey said sulkily. "He's the guy, all right."

"Look," Danny said. "I'm a law-abiding citizen or I was until you guys snatched me. Now I'm violating my bond. I don't know what cause you've got to be mad at me—I didn't do anything in Joe's but lose all my dough."

"No? Maybe not. But what you did tonight was pretty tricky. You won't get away with playing dumb, Mr. Caiden. No one but a guy who knew to the last dollar how we had things rigged could have loused us up the way you did. Hell, I know exactly how every race is going tomorrow but even knowing that I couldn't have ruined the odds the way you did."

"I figure you cost the syndicate about twenty-five grand." He crossed his arms on the glass and leaned forward. "And I know what your take was, too. Forty-five hundred fish, that's all. Less than a fifth of what you could of made by playing with us instead of against us. *Who are you working for?*"

"Myself," Danny said.

[Turn page]

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"Don't give me that. Nobody who knows the score is going to take a fifth of the kitty instead of the whole business. And no one man could beat down the odds no matter *what* he knew. He'd have to have touts and markers. Who's paying you to louse us up? Who's your boss?"

Danny shrugged. "I don't have any boss."

The man's eyes became still harder. "If you want me to swallow that you'll have to prove it. If you did all this by yourself you got a system."

"You could call it that."

The racketeer smiled gently. "Explain it," he said.

For a moment the two men looked at each other. Then Danny smiled back.

"All right," he said. "It's not difficult—when you know how. In dealing with the mass behaviour of any indefinitely large numbers of similar objects—such as electrons or dollar bills—the old Hamiltonian laws of periodic motion don't apply. That is, the variables don't follow the commutative multiplication law.

"In plain language, if you ignore the horses and concentrate on the dough, you can describe its motion as a problem in matrix mechanics—not as a trig series the way an actuary would go about it. You can't follow any individual dollar but you can say that its position in the betting order can be described at any point as a table of integer differences between value-terms—"

"Tooey," the man behind the desk said. A stunning blow caught Danny just behind the left temple. He lurched to one knee, his head ringing painfully.

"Now perhaps we understand each other," the man behind the desk said. "I know all the kinds of double-talk there are, Caiden. A guy once tried to talk me into buying an actuarial system. Now suppose you tell me who it is you're working for."

Danny shook his head. The sharp, agonizing ringing continued. The voice of the man behind the desk seemed doubled, somehow, the second section arriving just behind the first like the pay cars of a crack train. The second section was saying, "This is a new one. Wise guy, too. Maybe Joe's,—no, he hasn't the nerve. This guy the boss? No such luck. Sweat it out of him before—"

**H**E lifted his eyes and looked at the man behind the desk through a fog of pain. The queer, jerky monologue continued though the man's mouth was shut. Danny recognized the pain then and it made him sick with hope. Could such a simple thing as a knock on the head have turned the trick? With the psi centers in a state of excitation from the radio-ekacesium it was possible. Cautiously he reached out for Tooey's mind.

Tooey could hardly be said to have a mind. He had an intricate delicately-balanced complex of glandular states, capable of being triggered in any direction by the slightest thalamic disturbance. But his cortical thoughts, when he had any, were of about the same calibre as the speeches in the balloons of comic strips. The stream of consciousness of the man behind the desk was of a considerably higher order but it had its own instabilities. There was fear of deposition in every impulse of it.

"Speak up, you. I don't want to miss my breakfast. I got business."

"Joe," Danny said thickly, struggling back to his feet. "I didn't mean any harm. Honest."

"Who gives you the figures?"

Danny thought fast. "I get 'em by mail," he said. "I have to go down to Joe's to check when I take 'em in to be sure there's no mistake. I don't see him. I just make bets like anybody else and he sends me word."

"How?"

"By my wins and losses. If they check out the letter was okay and I go ahead and—"

"All right. Tooey, take him out."

The gorilla's hand descended on Danny's shoulder. The telephone on the desk shrilled. Danny could feel the adrenal surge of alarm through the narrow corridors of Tooey's brain, and the instant hair-trigger adjustment of the man behind the desk.

Tooey's was the usual stupid reaction to any modern news-carrying system—the news was always bad to such a mind because it was new and hence always unexpected. For the man behind the desk any change might easily be an improvement. Neither attitude was sane but the boss' was at least human.

"Yeah?"

The voice of the man on the phone



came to Danny a little late, rebroadcast through the filtering reflexes of the intervening mind. "Boss, there's heavy cars on the road. Not cops but some kind of raid, looks like. Looks like the Pinks."

"Drop the shutters and wait for 'em."

"But, boss, there's about five guys outside and the guards—"

"Drop the shutters. They took the guard posts as the easy jobs. Let 'em learn different." He hung up. "All right, Tooley, stash him—what you waiting for? The Pinks are here."

"Cripes!" Tooley said. He wrenched Danny around and propelled him through the door. A moment after it had shut there was a metallic *brang* all through the low building. Armor-plate, Danny guessed.

The corridor was empty and not very well lit. Danny's searching brain found the ends of Tooley's necktie, flipped them over the gorilla's shoulders and strangled him with such indecent haste that his head fell straight along his back before his body had struck the floor.

Danny prowled away from it without looking back. He bore the poor animal no grudge for the blow to his temple but he could hardly regret the snuffing out of so feeble an intelligence. And if the Pinkertons were closing in, Danny didn't want to be found here.

There was no way out on the ground floor. The closer Danny came to the exits the more he was buffeted by hunched shadows carting weapons to prepared emplacements. The fallen steel curtains would no more pass Danny than they would pass the raiding Pinks. He found a stair-well and climbed it. On the second floor—actually only a furnished attic—tense figures were already crouching in the pre-fabricated machine-gun nests of dormer windows. There was no way out.

No way out—Danny's head throbbed violently. For a crazed moment he wondered if the radioactive stuff Todd had given him were destroying his mind. Then a lowering shape swung on him and the dim attic quivered and snapped out of existence.

\* \* \* \* \*

For a long time Danny lay where he was, the brambles piercing his clothes

and scratching at his face and scalp as he breathed. His head hurt horribly and he was soaking wet all along one side. Distantly guns chattered in the darkness and the odor of decaying leaves was in his nostrils.

Finally he was awake enough to wonder where he was. He sat up, his head hammering with every motion. He lay sprawled on one elbow until the cold wetness became intolerable, then got to his feet. Trees swayed all around him.

Without knowing why he began to stumble away from the sounds of gun-fighting. Behind his eyes a multitude of voices murmured things that made no sense.

He reached out for Marla—but that made the murmuring louder and at the same time more indistinct.

**T**HE trees whispered, too. The whole world was a chiaroscuro of whispers and shadows. He began to run.

The sight of the city helped to bring back the things he needed to know. He stood on the edge of the scrub forest, weaving drunkenly, and looked at the haloed lights. Behind him the sounds of battle diminished.

*I'm out. It's like my dream of floating. I got out but I don't know how.*

He began to stagger toward the city. His mind was dead, drained of everything but the basic impulse to live. The psi faculties, ill-understood and undependable, had burned out. Danny remembered only dimly Todd's warning of quick fatigue—and nothing he had found would explain why he had been snapped like a pebble from a sling, from tension to the swamps of trance.

And Todd was helpless now, trussed with his own wire in a stuffy closet, all his work come to nothing. The psi power was gone, evaporating into chill mists.

The nightmare remained. There was no longer any refuge now that the psi power had burned out unless—

Wait. There was still Sir Lewis Carter. If there was one man in the world to whom the truth, whatever it was, would seem neither daring nor incredible—that man was Sir Lewis Carter. He had spent most of his life exploring areas of experience at which most scientists only laughed.

He had risked a substantial reputation to explore the marches of the

psychic continuum. He had survived the gibes of the press and the attacks of less imaginative men in his own field with equal determination, even with aplomb.

There was at least a haven at the Psychic Research Society. Carter could hide him, at least long enough for him to get some rest.

Danny shuffled his uncertain way through the stubble.

## CHAPTER VII

### *The Adepts*

**W**HEN Danny awoke he felt rested, but he was stiff all over. Late afternoon sunlight was streaming in upon him through a tiny barred window. The bars were the criss-cross kind common to the first floors of brownstone houses though the window did not seem to be on the ground floor.

The chrome-steel grating that served for a door certainly was not common to brownstones. Danny stared at it, blinking. Now what—had he passed out and been picked up by the F. B. I.?

But he could clearly remember stumbling up the front steps of the Psychic Research Society's place. He could remember as well his sensation of surprise as the door opened while he was reaching for the handle. Also he could remember seeing Sir Lewis Carter and hearing his deep friendly voice say, "Come in, my boy. We were just talking about you."

Sometime after that he had passed out—perhaps almost immediately. He couldn't remember now. Sir Lewis and two other men, all three of them in deep crimson robes and cowls like monks, had had some sort of conversation and then—and then—

He couldn't remember. Still it seemed likely that he had not left the brownstone. Were the bars then to keep him in—or to keep someone else out? There was that dream of floating—had that been only the dream it seemed or had he been drifting around the building like some fantastic balloon? As an explanation for the bars it was anything but satisfactory but it was the only one that occurred to him.

He became conscious once more of that indistinct multifarious murmuring inside his skull. It both pleased and disturbed him. It meant that his developing telepathic sense had not burned out for good. But he still could not select any one voice from the pulsing of "sounds."

He would have liked to search for Marla and Todd but a tentative attempt to reach them simply made the murmuring louder and more confusing. There were several million minds between them, all indistinguishable from one another. Telepathy, as Rhine had shown years ago, was not in any way comparable to radio—people were not neatly spread out along a wave-band, each with individual wavelength allocated. In telepathy there was no analogy to "sending" or "receiving," though the terms were used for convenience.

Telepathy was, instead, just one factor of ESP. The telepath perceived the thought as he would perceive any other event in space-time. The mind which held the thought did not need to "send" it. And whatever the principle of selection might be Danny didn't know it.

There was a stir beyond the bars. Danny looked up. It was Sir Lewis and the bulky, anonymous men, in the robes he had remembered.

"Good afternoon, my boy," Sir Lewis said. "I trust you're rested."

"Rested but puzzled," Danny said. "What's the idea of the bars?"

"The bars? Why, to maintain the status quo pending a decision." Sir Lewis smiled as if that explained everything. While he was smiling, there was a hum, and the bars slid out of the way. "Our Council is meeting now. I expect we'll know the whole story within an hour or so."

"What story?"

"What disposition to make of your case. I'm afraid you've become rather an embarrassment to the Brotherhood. Do you have a water tumbler in here? Ah, yes—fill it, please, and take this."

This was a pill about the size and shape of a robin's egg. Danny eyed it with disbelief.

"I'd have to be a horse to get that down. What is it?"

"It is a requirement," Sir Lewis said blandly. "Take it, please."

"Impossible."

Sir Lewis moved his head slightly. The men in the deep crimson robes

stepped forward with the quickness of panthers and locked Danny's arms to his sides.

"What the—!"

Sir Lewis deftly thumbed the huge bolus into his mouth, emptied the water tumbler after it and held Danny's nose. Danny gagged and retched. The astronomer, undiscouraged, tried again. This time it worked. Danny could feel the bulky object inching down his gullet. He felt as if he had swallowed a basketball.

After a moment he also felt something else. The murmuring inside his head was gone. In its place was a horrible scrambling dislocation, not only of the telepathic impressions but even of his own thoughts. He found himself incapable of thinking a sentence through without a reeling dizziness that threatened to black out the whole room.

SIR LEWIS watched him for a moment, then nodded. "A resonator," he said pleasantly. "The Brotherhood wants to take no chances. It would be awkward if you were to hypnotize someone or teleport yourself out of the building. We can depend on the little apparatus to—ah—be with you until some decision is reached."

"What Brotherhood? What's this all about?" The effort to frame the question made him dizzy again. Evidently the resonator left him only enough cortical energy to carry on one kind of thinking activity at a time. If he wanted to speak, he'd have to expect to be unable to see while talking—or to hear, for that matter. The thing was diabolical—and seemingly senseless.

"The Brotherhood of the Psi-men," Sir Lewis said, "of which I have the honor to be Hegemon. We were much surprised when you blundered into our building. At that very moment the Council was seated in solemn session to determine whether you too should be a Brother or should be eliminated. Perhaps our deliberations were what led you to us though we had the rooms carefully shielded."

He turned abruptly. "Come along, please."

Danny had no choice. The two muscle men at his side propelled him firmly along the corridor and into a small automatic elevator. The artificial jangling in his mind was terrifying.

The Council members were robed and

cowled like the three PRS men Danny had already seen. They sat immobile at a diamond-shaped table until Sir Lewis seated himself. Then they turned and looked at Danny.

"Is this the candidate?"

"Heck, no," Danny said. "If you want me you'd damn well better ask me politely whether or not I want you."

When the blackout lifted the nine men were all looking at Sir Lewis. "Frater Hegemon, we understood that the candidate was to be brought here under resonance," someone said.

"He is. The Council will please remember that Mr. Caiden is an unusually gifted candidate, potentially the superior of us all. Otherwise this meeting would have been unnecessary."

There was a stir among the delegates. They didn't like that, these men with their mumbo-jumbo robes.

"Are you certain that there is no question of psychic activity?"

"None whatsoever. You may expect, however, that Mr. Caiden will be in better possession of his mother wit than most of you in like circumstances. Conduct yourselves accordingly."

Another stir—Sir Lewis was giving the Brotherhood rough treatment. But there was still no hint of what they wanted of him or what they did when they weren't acting like characters in an historical play.

"Mr. Caiden," Sir Lewis said.

"That's my name."

"Try to maintain an open mind," Sir Lewis said. "You have good reasons in your own mind for your attitude. But I assure you that our precautions are necessary and that the game is, in the end, worth the candle. Every man you see before you is an adept in the handling of some psychic force. Some of us are telepaths—some are hypnotists—some are teleports—some, clairvoyants—some, telekineticists—and so on.

"It happens rarely that a man is born with some such gift. The average human being has never considered the powers that lie in the mind or, if he has considered them, has so considered only to scoff. You are here because you have the gift or several of them and thus are automatically eligible for membership in the Brotherhood."

"All right," Danny said. "I'm eligible. What's in it for me?"



"More than you dream. The rare and select human beings whose gift it is to know and manipulate the psychic continuum are the hope of the race. In that mysterious universe, where normal space-time laws do not apply, the mind moves and has its being. And the psychic continuum is dominant over the space-time plenum. A man who knows this and can use the information can be—for instance—as rich as he chooses—or as powerful."

The resonator made coherent thought almost impossible but Danny did not need any very intricate analysis to find the bugs in Sir Lewis' design. "Men who have real power to exercise," he said, fighting to keep his maverick mind clear, "do not hide behind identical robes and mysticism. And men who have power do not offer it to others."

"Of what power are you speaking?" Sir Lewis asked reasonably. "We have no political power, true. That is forbidden us by the rules of our Order. One of the characteristics of the Psi-man is that he knows how little his gifts avail him in most mundane affairs. Our brothers in the East discovered long ago that the psychic forces are not of this universe and are degraded by mere power-seeking."

"No, Danny, you mistake us. Our main purpose is the preservation of these gifts. It was Milton who called a book the precious lifeblood of a master spirit, embalmed and treasured up on purpose to a life beyond life. We mean to treasure up the spirit itself. To that end we select carefully those of our fellow-men who show the gifts we know to be rare and priceless. We establish certain rules of conduct that that gift may not be frittered away in the pursuit of power."

Danny laughed. "What you say is sense-free," he said.

"Why?"

"Because, first of all, there is no psychic continuum. Secondly, because what you call 'gifts' are only side-effects of two fundamental parapsychological activities that can no more be passed on than the ability to reason or to write music. Either you inherit it or you don't. No society can decide beforehand where it may appear. Finally, because the employment of force and fraud is the essence of political power, however you disguise it."

HE missed a substantial part of Sir Lewis' response in the throbbing blackness that had enveloped him the moment he had begun to speak. He took advantage of the divorce from his surroundings to think frantically while the opportunity lasted.

These people, with their talk of a "psychic continuum," obviously had no conception of the infinite series of overlapping plena which, if Danny and Todd were right, lay at the bottom of all the phenomena covered by the sign  $\Psi$ . Their reliance upon a resonator to keep Danny's psi faculties under control did not jibe with their ritualistic views of the psi faculty itself.

"—without notice," Sir Lewis was saying. "Unfortunately we are unable to take such a view of the matter. We cannot allow any man, whatever the strength of his disagreement with us, to remain outside our circle after he has discovered that we exist. Our customs may be to some extent irrational. But that is not for any outsider to say. Those who would change us must be of us. Those who would not must die."

Danny struggled to keep his quivering, fragmented mind focused upon the point at issue. "I won't play," he said. "I don't hold with this theory of the Select. The psi faculties are latent in every man's mind. If you're all the specialists you pretend to be you should be spreading the knowledge around—not hiding it."

"Not everyone can assimilate such knowledge," Sir Lewis said. "Not everyone has the chromosomes for it."

"I doubt that. The evidence seems to indicate that it's as natural as five fingers and two eyes. Your society is founded on the notion that a man with two eyes and five fingers is somehow superior to men who haven't bothered to count how many eyes and fingers he has."

"You've set up a master-race theory because you all have some limited psi faculties—but the psi faculties are available to *everyone*, with training. You call yourselves experts but you can't even tell the psi faculties apart from non-parapsychological functions—you still think hypnotism is a psi faculty!"

He wished fervently that he could have seen the reactions of the cowed figures, but the roaring darkness en-

gulfed him and would not go away. When his sight finally began to clear, the Psi-men were motionless and silent.

Finally, Sir Lewis said, "Are there questions from the board?"

No one said anything.

"I call for a vote."

One by one, the cowed figures rose and left. At length there was only Sir Lewis and another man and Danny.

"I vote to retain the candidate," the unknown man said. "His kind of thinking is rare and valuable in the Brotherhood. It is unfortunate that we have so frozen into our age-old mold that we can no longer see wherein we fail. Is there no hope that this vote can be set aside?"

"None."

The unknown man, whose voice seemed suddenly to be a voice that Danny should know, said, "Then I will leave also. The Brotherhood is outmoded by its decision in this case. You will not see me again."

He vanished. The effort to understand why cost Danny his vision. When he could see again Sir Lewis was alone and watching him.

"I'm sorry, Danny."

"Skip it. Your Brotherhood will execute me now. Is that it?"

Sir Lewis shrugged. "I'm afraid so. They fear you, I think. Especially our Prytanis fears you. He has held his post for decades. And you didn't go out of your way to play along with us."

There was a long silence. At last Sir Lewis said, "Do you know the name of the man who voted for you?"

"No," Danny said. "And I wouldn't tell if I did. Your society would kill him for the vote as they seem prepared to kill me."

"Yes," Sir Lewis said. "I think they would. I had hoped that you knew that man. He might have helped, somehow. He was always a stranger to us and unpredictable. I had banked upon his taking a stronger stand for your cause than he did. His abandonment of us will do you more harm than good."

"What about you?" Danny said, fighting away the black dizziness.

"I? I am bound by the rules of the Order. I have long ago surrendered my personal preferences. I would have you live but—the Brotherhood would not. I am bound by that decision."

"You must die."

THE room was a fairly comfortable spot—as cells go. It was roughly twelve feet square and since it was on the corner of the building it had two windows. Neither one of them was large enough to permit a man to get through, even if there had been no bars. The barred door was of the electrically-controlled sliding type used in modern prisons. It was opened or shut by a switch in some central office, so there were no keys to be snatched from careless guards.

Still, it wasn't bad. It was clean and dry and the north window looked down upon the heavy traffic of a market district, where huge trailer trucks unloaded produce all night in the glare of mercury vapor, and small delivery wagons hauled it away through clouds of exhaust fumes all day long. The west window was tiny, and overlooked nothing but an airshaft. The windows across the shaft were blind and labeled *Shaftway*.

Not, perhaps, a restful environment but an interesting one. As for the furniture, the cot was surprisingly comfortable and the plumbing arrangements were modern if rather public.

Danny inspected the place minutely but found nothing. He was willing to lay odds that an experienced criminal couldn't have found a way out. After the inspection he began to pace, leaving the cot sprung back against the wall. Only a lamb would sit and wait for death.

Determinedly, he forced himself to stop stalking, to go over to the wall and let the cot down again, to sit quietly. Easy, old son, he told himself. No sense in driving yourself potty over a little inaction when all the rest of this screwy business hasn't been able to do it.

He wished desperately that he were rid of the resonator. But as he remembered the normal rhythm of the digestive process he couldn't expect to say goodbye to the damned thing for another forty hours. It was probably still in his stomach at the moment.

In the shimmering chaos of his thoughts the idea did not at first make any connection. When it did he found himself trembling with excitement. If the resonator functioned in principle as Todd's did it would be setting up a continuous shuttling of nervous impulses between three "frames" or Pois-

son brackets of space-time—the one he would “normally” occupy, one in the immediate “past” and one in the immediate “future.”

Unless it were a highly simplified model, built only to perform the one operation it could be adjusted—he strode over to the washstand, nicked up the bar of yellow soap and systematically began to eat it.

Half an hour later, dizzy with triumph and exhaustion, he had the metal egg in his hand.

The two halves of the casing weren't welded but they were fitted together tightly. Danny grinned. The PRS had relieved him of his jackknife but they had left him something far more efficient—a tiny electrician's screwdriver, its amber handle held in his pocket on a fountainpen clip. With the flap of the old Army shirt down over it the pocket looked empty.

That was their second slip. Leaving him soap had been the first. He pried one half of the casing off. The little mechanism was a marvel of designing. It contained only one tube, a thing about the size of a peppercorn, and most of its circuits were printed. Probably the final stages of assembly had been carried on under a binocular microscope.

Todd's series of steps had been summed up in a single transformer. Its innards were hidden but Danny knew better than to expect to understand the device at a glance. All he needed to know now was embodied in the two wristwatch-sized set-screws on the top of the transformer casing.

The device was adjustable.

He filed the blade of the screwdriver on the stone windowsill until it was thin enough at the point to fit the set-screw slots, and cautiously turned the first one. Peace settled over him like a warm cloud. The uncontrollable jittering of his cortical impulses had stopped.

After a moment he noticed that the telepathic murmuring was gone, too. He turned the screw a little further. The jangling confusion came back. Hastily he returned the screw to its former position.

The resonator evidently could “spread” the nervous impulses in either “direction” or confine them to a single “frame.” With the first screw in neutral it could hold the mind fixed. That meant

bleeding away of volitional control but it meant no possibility of using the psi faculties either. They depended upon complete, open contact with the alternate “frames” of the serial universe.

If he was to have any chance of getting out of here before the Brotherhood stuffed him down some manhole he'd have to figure out how to get the spread back without sacrificing the control. Throwing the resonator away was out of the question. Properly understood it would work for him—and even at worst it would be invaluable for Todd.

There were two screws. Mathematically, each one should represent a variable in that basic ESP equation Todd had been trying to find. He had thought that it was a problem in matrix calculus, involving Heisenberg's “probability packets.”

The original Heisenberg formulation was  $pq - qp = h/2\pi i$  (1). The  $q$  was the generalized coordinate, not variable under serial conditions,  $p$  was momentum and  $h$  the Planck constant. Momentum in terms of psi was probably the velocity of propagation of nervous impulses—that at least would explain the effect of the first control-screw. And the second one—

How constant was Planck's constant in an infinite overlapping series? The question was meaningless framed that way; there was no such thing as a constant in such a series *except a rate of variation*. In other words the value of  $h$  would be different from frame to frame.

The tuning principle! Somebody in the PRS-Brotherhood had had his head out of the mush of the “psychic continuum,” that was a cinch. Danny turned the second screw.

The first thing he heard was a single word, in a perfectly clear and recognizable voice. The word was, “Atta-boy!”

The voice was—Sean's.

## CHAPTER VIII

### *Thunderbolt*

THE second thing that Danny heard was a long muttered grumbling, deeper than the rumble of the produce trucks. He stepped to the north win-



dow. The fraction of the night sky that was visible was covered with low-scudding, boiling clouds. A storm was coming up. The neon-tinted glare of the city painted the cloud faces.

Danny changed his plans on the instant. It would be possible, now that the resonator was working with him instead of against him, to teleport himself out of here as he had unknowingly teleported himself from the gambling syndicate's hideout and as—apparently—the unknown man who had voted for Danny had teleported himself from the Brotherhood meeting. Had that man been Sean? The evidence was almost non-existent but Danny was sure of it—and these days he trusted his hunches.

But simply skipping would not solve the problem now. There were too many factors to take into account. It was necessary to locate Marla and Todd, to get clear of the net of circumstantial evidence that the F.B.I. had woven about him. And above all it would be necessary to keep clear of the PRS.

The thunder rumbled again as Danny left the window. The PRS was still to some extent an unknown quantity but it was a cinch that it was a nest of trouble. Danny smiled ruefully as he remembered his first visit to the brownstone. He'd stuck his head right in the proverbial lion's mouth and the lion had just shut its eyes and yawned.

Danny could sense the men of the Brotherhood now, moving about the building, intent upon their mysterious affairs. One of those men was bound to be a clairvoyant, mentally posted to Danny's cell—a man who would give the alarm at once if that cell should suddenly become untenanted. If it were possible to get out in some fashion which would cover his tracks—

A sudden flash of lightning cast criss-cross patterns on the floor from both windows. Despite himself Danny jumped. The burst of electrical light had seemed entirely too close for comfort. A second later came a battery of thunder, wild and deafening.

If the place were to be struck by lightning, for instance—

Well—why not? The earth-sky relationship of lightning had been known for two hundred years. Even grammar school level books described the widening of potential difference and the preparatory upstroke. If a man could

throw furniture around with PK it should be a relatively simple matter to maneuver static electricity.

But it had to be done quickly. He stationed himself in the southwest corner of the room, turned both resonator controls as far as they would go and focused every erg of his enormously boosted psi energy upon the opposite corner. Deliberately putting out of his mind every thought of Marla, of the PRS, of himself, he concentrated upon driving out every free electron from that corner of the building.

There was resistance. The space-lattice of atomic nuclei in the stone was not as regular as that in metal, and the wandering charges tended to gravitate toward the nearest source of binding energy and become planetary. By driving the free positions inward however he slowly tipped the balance.

Footsteps resounded in the corridor. Only a few seconds were left—was the charge high enough? There was the alternate danger—if it were too high he would surely be electrocuted. He tightened his grip on the resonator and herded and harried the fleeing electrons.

Someone stopped at the bars and peered in. *Now!*

With a last burst of effort he sent the bunched positrons fountaining upward. A forest of lightning bolts leaped back, playing gleefully upon the corner of the building. The thunder stunned him. The whole universe burst into flame and toppled toward final darkness in a blast of sound.

With it toppled Danny, every muscle knotted with galvanic tetanus—blind, deaf, convulsed into helplessness.

\* \* \* \* \*

After some several eternities, the agonizing stiffness began to abate and Danny felt an even more painful prickling run through his arms and legs—as if his muscles had been “asleep,” and the blood were returning to normal channels.

The roar and flash of the lightning-play penetrated gradually to his consciousness, then began to diminish a little. He stirred. The movement forced a low groan from him and something dug sharply into his back.

His toes began to prickle. Experimentally he tried to sit up. A spasm of pain shot through him but after awhile

he managed to force himself up on one elbow.

He seemed to be lying on a sharply sloping hill of brick and plaster. Twenty feet above him a toilet lay bent double, fountaining water down over the tumbled ruins. A cloud of brick-dust was still rising and in the sky overhead the clouds bashed their ram's-heads together noisily.

**A**T the bottom of the hill, a trailer truck was tilted over on its side, its motor still idling, the collapsed side of the brownstone engulfing most of it. Danny clambered to his feet and picked his way gingerly down to the roof of the truck.

He realized suddenly that his right hand was shaking violently with fatigue as if he had been hanging by it for half an hour. Curiously he opened it. The resonator lay in his palm. He managed to grin. If he had not known what a death-grip was before he knew now. He put the tiny, invaluable mechanism carefully in his shirt pocket and buttoned the flap.

The truck would do. Danny eased himself over the edge of the trailer and dropped to the littered ground. There was a body in the cab of the truck itself, a body rigid with the instantaneous stiffness of electrocution. The smell of burned flesh mingled incongruously with a strong odor of fresh celery from the trailer behind the cab.

Danny heaved the body out and settled himself on the tilted cushion before the wheel. The motor hummed contentedly. After a brief search he found the lever which released the air pressure holding the trailer sealed to the truck. He pressed it and the cab settled back to an even keel with a sodden sigh. Danny stepped on the gas.

The drive-wheels chewed into the asphalt and carried the truck away. Behind him Danny heard a roar of collapsing masonry as the trailer tipped over and was buried. Then the sound was swallowed in thunder.

And now what?

Danny had a truck, a means of transportation to some place unknown. At the moment he was fairly safe from the police, and the F.B.I. couldn't be everywhere at once. But he had to find some refuge.

His apartment was out—that would

be watched. Probably the old job would be watched, too. The PRS was no longer a haven—it was at once a goal and an enemy. Neither the Fortean nor the Rhine people were far enough into supranormality to be willing to risk offering haven to a probable criminal.

But for the moment he was a free agent. He was just one more truck driver, prowling the traffic-heavy streets of a storm-ridden city. Sir Lewis no longer knew where he was. Neither did the F.B.I. Not even Sean—

The traffic light ahead flickered, and Danny swung his monoxide-breathing mastodon down a side street. No use attracting the attention of cops. If he obeyed the traffic lights, he'd be just one more truck on the way to pick up a trailer. In the meantime—

In the meantime, why not Sean? Clearly Sean had meant to be overheard when he had offered his one-word congratulation to Danny for working out the puzzle of the resonator. And equally clearly he was in this business somewhere. Danny was virtually certain that he had been the unknown hooded man in the PRS meeting and that he owned one of the voices Danny had heard earlier in the game—the voice that had said, "Let the finder beware."

The psychiatric advice had been a blind—but a blind for what? Where did Sean fit—and what did he know?

It was a cinch, anyhow, that Sean wouldn't care a snap of the fingers whether or not the F.B.I. was interested in Danny. Very probably, he'd enjoy it.

Sean's place was a good distance away, up on 125th Street near the University. Danny turned his behemoth toward the West Side, where he could pick up the highway to the north side of town.

Halfway there he discovered that he was hungry. He couldn't remember having eaten anything since the liver-wurst-on-rye sandwiches, unless he counted the resonator or the soap.

He turned the truck off the highway again and found a diner. Inside, he ordered hash-and-eggs and filched a tabloid from a drunk asleep in the booth behind him. On page 3 it said:

**SNATCH WITNESS IN PRICE-FIX PROBE**

Mystery Girl Held By FBI  
Missing Psychologist  
Linked to Grain Case

The story was incredibly garbled but a few facts could be worried out of it. Todd had vanished and Marla, evidently without stopping to think, had carried the story of the kidnaping to the police. It seemed clear enough that the gamblers, having survived their battle with the Pinkerton men had come back for Todd.

The old man couldn't take much rough treatment. Danny could only hope that Todd would tell the exact truth—the fact that both men talked the same kind of double-talk might puzzle the top man of the syndicate enough to make him hold off on the brutality for a while.

Marla was in no better position. She was in the cooler, where the PRS could locate her at its leisure. Up to now the PRS had never heard of Marla. But the public linking of her name with Danny's would be enough to arouse their interest. If Sir Lewis hadn't been killed in the lightning barrage he would be sure to check every possible angle. He was too shrewd to take Danny's "death" on faith.

Suddenly Danny was struck anew with a sense of terrible urgency. He gulped his coffee and threw the dollar bill on the table. There was nothing for it now but to get to Sean's as fast as possible and there plan some way to get to Marla and Todd before the storm broke.

He put the truck in gear and nosed it out onto the highway again. It was a tough assignment for an ex-trade journalist, whose only present prospect was that of hiding in a friend's apartment until the cops caught up with him.

What kind of an assignment it was for a man with a fully operative psi faculty might be another matter.

The truck's engine pounded. Danny, unused to the sound of any engine but that of a private car, suspected that it had burnt out a bearing—but it ran. After awhile the highway turned off toward the river and ran through a quiet deserted dim park. And then the street numbers climbed toward Sean.

SEAN was wearing a coffee-colored robe and red slippers so fuzzy that his feet appeared to have been stolen from some outrageously dyed lioness. If joblessness bothered him he did not show it. He looked perfectly composed

and, as usual, faintly amused.

"Why, hello, Danny," he said. "Were *you* the cause of that racket out in the street? You must have come here in a ten-ton Christie tank."

"Practically," Danny agreed. "Look, Sean, I'm in a worse jam than ever. Can you take me in? I should warn you that the F.B.I. is after me and you'll be in trouble too if I'm found here."

"Don't talk so fast, old man, you're out of breath already," Sean said. "Yes, of course, come in. I've always wanted to be an embattled fugitive and barring that I can always shelter one."

Gratefully, Danny went inside and dropped into a low, deep chair. The apartment was surprisingly luxurious. In this neighborhood it probably rented for two hundred a month. Sean caught Danny's wondering glance.

"Yes, it's a bit dear for an ex-food editor," he said. "But now that I'm out of that job I needn't look like a food editor any more."

"Oh. You've had dough all along and were just trying to pass as a working man?"

"Yes, that's it. So you can see that it didn't take much courage for me to quit when you did." Sean smiled gently and sat down on an ottoman, stretching out one outlandish scarlet slipper. "The time was coming when my real job would take all of my time anyhow."

"And what's that?"

"Don't you think *you* owe *me* a confidence or two, first?"

Danny felt himself blushing. It was a perfectly fair request. And now that he had—so to speak—thrown himself on Sean's mercy he didn't feel morally free to refuse.

"I figured you knew I hadn't told the whole story," he said dully. "This is it."

He talked for nearly two hours in the soft unvarying lamplight. Throughout the recital neither Sean's expression nor his position on the ottoman changed by so much as a wink. He seemed frozen in stone, one arm thrown across his lap, one leg stretched out, one hand propping up his chin. The position reminded Danny of a Doré drawing of Satan, and Sean's always rather diabolical handsomeness completed the impression.

"I see," Sean said at last. "Fairly and truly told and no little sacksful of reservations hidden in the mental cellar any more. Thank you, Danny."



"You're welcome, of course, Sean. You can see why I didn't want to trot all this stuff out when we first talked. Of course a lot of it hadn't happened then."

"Yes," Sean said. "Still, much of it needn't have happened if you had told me everything you knew in the first place."

He stood up, hands thrust deeply into the pockets of the robe. "You see, Danny," he said, "it was quite impossible for me to be honest with you until you were honest with me. Until you told me of your own free will just how things were with you I couldn't help you. May I see the resonator, please?"

Silently Danny passed it over. Expertly Sean sprang the shell with a pressure at its sides and inspected the mechanism. Then he covered it again and returned it.

"It is the same. I'm quite proud of it."

"You designed it?"

"Yes, of course—those mutton-heads at the PRS are too muzzy with mysticism to master a technique as basic as serial resonance. I admit that I was worried as to what use they would make of it. Taylor and I estanned—"

"Taylor? The Fortean?"

"Yes. We estanned that it would probably be used on you and that the chances were good that you'd use it to get away from the PRS. Without it, your chances looked slim—but there is always an element of uncertainty in precognition and we could not be sure whether or not we were giving the PRS something which would do irreparable damage. We need not have worried. They are inherently incapable of scientific thinking."

"Who," Danny said, "is *we*? I've told my story. You tell me yours."

"Sure," Sean said. "Real psi-men—not those ceremonious criminals at the PRS—are loosely organized all over the world. Our main purpose is to keep a close eye on people like the PRS members, who develop some small facet or another of the parapsychological abilities and use it badly."

"They've been playing the market, and they've evolved their elaborate ritual for protecting themselves because they dread any rivalry in the field. Their adepts can detect the development of psi powers in any individual and, if possible, they run that in-

dividual down and enlist him—or rub him out.

"Much of the time we've been able to prevent that but we have a firm law against interfering until such an individual has won his way to full psi power under his own steam. If he still needs help after that—and ordinarily he doesn't—we help him. But not before."

"I was pretty sure you'd come through but there is always the chance right up to the last minute that a man will freeze in some stage of his development and become a psychic cripple like the PRS men. I got in touch with Taylor very early—he's the senior member of our group—and it was agreed that I should take a post with the Brotherhood and plant the resonator for your use."

"If you turned out to be capable of using it to the fullest extent of its possibilities Taylor agreed with me that you should have every help our group could bring to bear—but not before. We were separated by a good many miles when this decision was reached and our conversations had to be rather vague. Both Taylor and I became aware early in the game that you could overhear us whenever we were talking about you. But it all came through exactly as we had hoped."

"Then you and Taylor were the voices I heard. I guessed as much. But what about Dr. Todd? He's been working like a dog for years on the whole problem. Surely he deserves some consideration."

"He's got it," Sean said. "Every human being is an unique problem, Danny. Everyone comes to the psi powers in his own way. Can't you estann the outcome of Todd's case?"

"I don't want to try," Danny said. "I haven't used any psi faculty since I got away from the PRS. I think they can detect it."

"Of course they can. I forgot. My contempt for them sometimes makes me forget that they have real and dangerous abilities. Well, let's go, Danny."

"Go?"

"To the syndicate hide-out. It's high time this sequence was closed. We should arrive in time to see the end of Todd's search and of yours. We'd best use the truck."

"I think it's about out of gas."

"I'll run it. I'll bleed off the gravitic moment of alternate cylinders and the gas can go hang. They won't suspect me of harboring you, I'm sure—and even if they do they're scared of me and won't interfere. Hurry—a new sequence has already started and unless this one is finished on schedule the new one will take over.

"The new one gives the PRS full control."

## CHAPTER IX

### *Fall of Sean*

**T**HE truck purred through the darkness. The lights of passing cars picked out Sean's sharp features. He was still smiling but there was little mockery in the smile now. He seemed to be taking real pleasure in the small job of keeping the gasoline-less engine running, as if his intimate relationship with the pounding cylinders were something he had often wanted to feel.

Danny, long harried by the forces that opposed any man who used the psi powers, saw for the first time something of the joy of them, saw it in the unusual relaxation of Sean's smile.

"Can't you tell me anything of what's coming, Sean?"

"Very little," Sean said. "We have been working for a long time upon two problems. One of them does not apply to the present situation—you will hear of it later. It is the only problem in man's history that is of real importance."

"And the other one?"

"Something rather like nuclear fission," Sean said. "We have known for a long time that the behaviour of electrons betrays a kind of thought. Everything Minowski and Dirac and Heisenberg have done on electronic motion shows thought."

"Our experience with the psi principles shows that the Bohr wave-atom has a psychology of its own. And three centuries ago, through the initial studies of the behaviour of mobs, we found our first inkling that this electronic psychology was mirrored in human behaviour."

Danny guided the truck onto the

King's Bridge and paid the toll. "What kind of human behaviour?" he said.

"Mob action, first of all—and secondly, schizoid behaviour. We think now that most forms of insanity represent a splitting of the personality into psi and non-psi groups. A schizoid is totally divorced from all cortical activity and lives in the psi centers exclusively. The paranoid is a case of cortical activity unmodified by any psi control. We have been looking for a way to induce this kind of splitting. It would be a terrible weapon."

"Cripes, Sean, somebody's ahead of you. Franz Werfel's last book has a war scene where there was a mental bombardment."

"Why not?" Sean said. "You don't get to be a serious novelist without some understanding of these things. Look out, Danny, the driveway is only half a mile from here. Give Todd plenty of elbow room and don't lose the resonator. I'm going to kill the engine now. All set?"

"Sure."

The engine sputtered and died. Sean opened the door of the truck and got out. Danny followed him. It was very quiet with crickets underlining the silence. There were a million stars.

"How come they come back here after the fight with the Pinks?" Danny whispered.

"You don't have to whisper yet. Anyhow they know I'm coming at least. As for the Pinks, they're of the opinion they won the fight and cleaned the place out. They have eight or ten dupes to show for it and some very firm opinions which they don't suspect are not their own."

"Did you—?"

"No, I didn't. The PRS is out here, Danny. They've been following your every move for days. When you teleported yourself out of the garret they took over and sent some of the smaller fry out after Todd. The Pinks were given a little mental manhandling and sent home. I don't know what happened to the boss gambler but he no longer counts."

"The PRS isn't sure you're alive but they're baiting the trap with Todd just in case you are—and they're baiting it by using the gamblers as a front." He stepped off the road into a field of timothy. "I'm blanketing you at the mo-

ment and I hope they'll think I'm alone. If they try to bluff me we'll have just that much more time to work. I think they will."

Danny felt a faint glow of warmth in his shirt pocket and fumbled in it for the resonator. The little metal egg was the source of the heat. "The resonator's heating up," he reported.

"Stand still."

After a moment Sean said, "How is it now?"

"Cooling off."

"Better put it in neutral. Evidently they've put out an impedance field. We don't want to burn it out. We'll need it." Danny sprang the case open and found the control buttons in the starlight. He returned them to neutral with the screwdriver, feeling the horizons of the serial universe close in around him. It was a curiously unpleasant feeling, though only a week ago the confinement to a single "frame" would have seemed normal to him.

"That's good," Sean said. "That blankets you twice as effectively as I could and avoids the risk of their catching me at it."

"I don't like it," Danny complained.

"I don't blame you. But it shouldn't last long."

Abruptly Danny saw the house, long, low and lightless against the spangled sky, with a smudge of forest behind it. He discovered it so suddenly that it seemed almost to have sprung at him.

"I'll go right on in," Sean whispered. "Give me a start and then sneak under that window that's just to the right of the chimney. Don't worry about being caught. They have a complete clairvoyant lookout covering this area, so they won't bother using the eyes God gave them—and with the resonator in neutral no ESP sense can spot you."

His teeth flashed in the starlight. "It's funny—I can see you but I'm so used to estanning people that I hardly believe you're here myself. You're something new in the world, Danny—you're psychically invisible!"

**H**E turned and walked swiftly toward the house. Danny lost sight of him almost at once and stood patiently in the sweet-smelling timothy. He missed the psi faculties though they had brought him little but grief thus far.

The sensation of being directly in touch with the basic fabrics of space-time had been reassuring, a new order of reality. But being, as Sean had put it, psychically invisible was no mean advantage. Danny began to understand better the magnitude of the risk Sean had taken in giving the PRS the resonator.

Still, Sean's precognition of the results had indicated that the PRS would be unable to use the little device. Danny wished fervently that he could estann, if only for a split second, the probable end of this sequence of events—Sean had been so indefinite about it. It was ridiculous, after all this long struggle toward full realization of psi powers, to be in a spot which forbade him to use them.

A rectangle of yellow light opened in the hulking shadow of the house, silhouetting Sean's slim body and a chunkier one. Indistinct murmurs drifted over the timothy. Then the light was cut off again. Danny sprinted toward the window Sean had indicated.

It was steel-shuttered but there were several slits big enough to see through. It looked into the same room that Danny had seen before, the one where the gambler and Tooley had questioned him.

The gambler was not at the big desk now. Instead it was occupied by a smaller man with a fringe of red hair and a bald pate. That head looked vaguely familiar but the man's back was to Danny. It wasn't the flowery white poll of Sir Lewis Carter—and every other PRS man Danny had seen had been cowed.

The door across the room opened, and Sean came in. The stocky man was with him but he seemed glad to be rid of his charge. Sean looked at the man at the desk and smiled. Danny pressed his forehead hard against the painted metal of the shutters and was rewarded with a just-distinguishable muttering.

"This is a pleasant surprise," Sean was saying. "The Brotherhood must be desperate."

"The Brotherhood knows what it's doing," the other man said. "Speak up, Hennessy. My time is valuable."

"Not to me," Sean said. "You're holding Dr. Todd here. We want him released."

"We know nothing about your Dr. Todd. You know as well as I do that we



have nothing to do with parapsychologists. We decided long ago that any program against them would speedily convince them they were on the right track."

"All events are unique," Sean said. "Todd is here. Do you think you could hide that from *me*?"

The other man was silent for a long moment. "No," he said at last. "Suppose Todd is here? Are you going to pretend that you could find him?"

"No," Sean responded, surprisingly. "I hadn't expected to find you in charge here. I've no doubt that you've got Todd squirreled away in some series it would take me a million years to locate. I don't propose to fritter away my youth beating my way through the Crusades or the reign of Mukkad Bejh in hopes of seeing Todd."

"I didn't think you would," the man at the desk said sardonically. "You won't find him in the Siege of Trebizond or the Teapot Dome incident, either. Any other guesses?"

"I said I wasn't going to try," Sean said. "Produce him."

"Drop dead."

For a moment Danny thought that Sean had done exactly that. He bent double in the middle and disappeared in front of the desk. The other man rose halfway to his feet. His desk rose with him, teetering, disclosing Sean leaning on one elbow on the carpet. The desk rose higher, made a sudden, abortive lunge toward Sean, and then turned on its own axis, dumping the ink-pot into the redhead's lap. The redhead swore.

Sean grinned, but he was sweating. "Why, Mall," he said. "If your god-fearing publishers could hear you now—"

The redhead turned, edging out from behind the desk, which remained suspended in mid-air. It was Mall, all right. The ink made a large black stain on one trouser-leg. He was sweating, too.

For a moment the two men faced each other, struggling for control of the heavy desk. Then, gradually, the wobbling object canted toward Mall. This time the lamp fell off, its shade rolling as it hit the rug. The desk continued to advance inexorably upon Mall, backing him toward the window. Danny pried frantically at the shutters.

"I don't like to use force," Sean gritted. "But your error in trying to kill

me was a serious one, Mall. Almost as serious an error as marooning Todd in a serial-sequence. Don't you know he's on the edge of mastering the psi powers? You're a joke of a psi-man."

"*Carter!*" Mall screamed. "Aubrey! Elliott! *Schaum!*"

The desk inched forward. Danny's bleeding fingers slipped on the cold metal, but the shutter gave a little. Mall's eyes darted around the room, and lighted upon the fallen lamp. The bulb burst and a thin wedge of electrical green shot through the sudden darkness. Sean cried out. There was a heavy slam as the desk hit the floor.

THE shutter screeched suddenly and swung open; at the same instant, the door was kicked back and Sir Lewis' bulky shadow was cast into the dark room. Danny threw a shoe over the windowsill and kicked the glass in. The green beam wavered and went out.

"What the devil, Mall! Did you get him?"

"I think so. He may still be alive. I heard something go through the window. Lord, he was strong!"

"These high-minded idiots depend too much on themselves," Sir Lewis said. "He could have been nine times as strong as you were and still a fool to tackle us single-handed." He kicked in the darkness until he hit Sean. "There he is."

"Yes, I spotted him. I've set up a nerve-block. Get one of your levitators to move him out of here and into the impedance-field. See that he gets medical attention first. If he dies we'll have Taylor and all the rest of that crowd down on us. Caiden must be dead."

"I wouldn't be too sure," Sir Lewis said. "He might not have gone to Hennessy, after all."

"If he survived he went to Hennessy," Mall said coldly. "The sequence would admit of nothing else. And obviously he isn't with Hennessy. Next time you have a crisis you can handle it yourselves. You'll depend upon my predictions hereafter."

"I'm still not satisfied," Sir Lewis grumbled. "But I'm only the Hegemon here. If you say Caiden's dead I suppose he's dead."

The two went out. Danny waited, scarcely daring to breathe. His foot had been sticking through the broken glass

throughout the whole conversation, but neither man had so much as looked toward the window.

After a short interval, a tall, spare shadow stuck its head around the door-jamb. Sean's body rose from the floor. The shadow disappeared. Sean's floated after it. The room was deserted.

Cautiously Danny climbed in. Mall and Carter had thought Sean still alive because of the sound of breaking glass; they hadn't bothered to check on whether or not something had actually been thrown—or telekineticized—through it from inside. But it seemed equally likely that the current from the burst bulb-socket had wounded Sean fatally. There had been no sign of activity from him since that final outcry.

It hit Danny suddenly, standing there in the tense darkness, that Sean had known what would happen. He had expected to lose his battle with Mall.

He had known that Mall was one of the key men in the PRS. He had walked into the trap the PRS had set with every expectation of falling before the man whom he had despised—and watched—for nearly two years in the *Food Chronicler* office.

If Sean were dead he had died in the expectation that Danny would be able to beat Mall and the PRS by himself.

And if he were not dead he would expect Danny to go after Todd and waste no time in trying to extricate Sean from a situation Sean had chosen for himself.

Most important of all he had given Danny an instrumentality which was capable of dealing with the entire situation if Danny used it properly. Up to now the best use of the resonator had depended upon its employment to restrict the psi powers. Until further notice Danny was going to continue to use it that way.

He peered out into the corridor. It was empty. At its end Danny saw the stairwell to the garret. The steps were distorted somehow—they seemed turned away from each other and phantom staircases spiralled into nothingness from each successive riser. Something strange was going on upstairs. It did not look as if a man could walk up those treads and expect to reach the top.

Todd was up there. But where "up there" might be was anybody's guess.

The Brotherhood had bled off all the possible sequences of space-time evidently. Every one of these steps represented a separate "sequence," each potentially as real as any other. The piled-up film-strips of the serial universe had been spread and Todd featured in only one of them.

A man who could think his way through the intricate math of the Minowski universe might find the main-line of probability which led directly up that staircase—but a moment's deviation into the old philosophical brain-cracker of "parallel" universes would strand the climber in some outrageously improbable sequence which led to a short and blighted future.

Danny took out the resonator and twisted the second screw. His mind, still confined to the single frame of "now," was released upon the instant to the fullest range of the Planck axis. More than half of the phantom staircases fogged into nothingness. Of those that remained visible six were solid and clamored to be climbed. One of them led to Todd.

Danny took the first step.

## CHAPTER X

### *The Steps*

**ONE.**

The timothy was gone. The lumpy terrain was dotted with stubble. But except for the few monster stems waving in the wind nothing grew upon it. A few scattered stones showed where the house had been.

There was still a smell of timothy but it was much too strong. The barren stank of timothy—rotten.

Behind the ruins of the house was a bare forest of dead trees, the bark peeling scrofulously from decaying trunks. The sky was gray and clouded. Toward the north, where the city should have been, was only a twisting of fog. A black bird, like a crow but bigger, circled in the damp wind and Danny heard its cry echoing out over the moor.

*Ke-a. Ke-a.*

There was no other sound. Bewildered, Danny turned back toward the house. A little of the stairway was still

standing and almost all of the chimney. The rest of the stones lay at random in the dead stubble, as if the whole house had been blown outward.

*Ke-a. Ke-a.*

Was Todd here? Was anything alive in this whole blasted sequence but Danny and the hoarse black bird? There was a pall of disaster over everything as if plague had struck—or war.

Danny looked down. The stubble was all around his feet, though he was standing in what should have been the hallway of the house. The sundered steps were still ahead of him although he had already ascended one of them.

Of course. This was one of the infinite number of overlapping sequences whose totality made the real world. It was neither wholly untrue nor more than fractionally true. New sequences were starting every instant. One of them, Sean had said, would give the PRS full control if it were allowed to establish itself—to come closer to the main line of reality.

It would be in that sequence that Todd would be hidden. The PRS hoped that Sean's cohorts would be forced to see the sequence realized to get Todd back into space-time—and a sequence where they were in full control would be the safest place for a prisoner.

It was unlikely that the PRS would want to see a world like this one realized. Todd wasn't here. In this sequence all humanity was—dead.

Danny looked up to see where the ruined staircase broke off. There was nothing beyond it but the gray sky. But it was a signal, a finger-post, that told him he had not yet climbed far enough. He lifted his foot.

*Two.*

For an instant the height was dizzying. He grappled for the hand-rail, and nearly dropped the resonator. The tower was a good two hundred feet high, swaying on a single reed of metal. The man beside him put out a steadying arm.

"Easy, old man, the wind is bad up here." It was Sean. Or—no, it was only fractionally Sean. Below, the encampment stretched for miles and tiny men scurried. Half the forest had been cut down to make barracks. In the field on the other side ten identical projectiles of shining metal stood in cradling webs.

The man who looked like Sean shift-

ed his rifle to the other shoulder. "All right now?"

Danny nodded numbly. The other man said, "Carrick says they'll be firing five of them tonight but I think it's just another latrine rumor. Cripes, it's cold up here. I'll be glad when we're relieved."

Something went overhead with a noise like a police whistle amplified a million times. It was going too fast to be visible.

"There's one that's not for us," the man who looked like Sean said conversationally. "Sometimes I wish I was in the Teletroops—they don't get any guard details. It hands me a laugh every time I think what the experts said. That bomb was supposed to make the infantry obsolete. Then they get this teleport thing and wham! The infantry's top dog again and gets shot back and forth around the world like so many cablegrams."

That was the clue. In a sequence where teleportation was a military necessity it was not, could not be, a secret of the PRS. Danny looked up. How did you climb empty air? He was already as high as he could go.

No, not quite. He made for the guard rail.

"Hey!" the man who looked like Sean shouted. "You crazy fool, you'll break your—"

Danny stepped off—

*Three.*

THE soldier's voice snapped out of existence. Danny was enveloped in humming dusk. High over his head a vaulted ceiling arched its back over something immense and dark and throbbing with power. The building seemed as big as a zeppelin hangar and there were tall windows in it that suggested a hangar. Through the windows Danny could see sunlight and the pointed spires of the distant city, familiar yet changed.

There were no men in the building. The throbbing machine was being tended by things on caterpillar treads, things like tractors with metal hands. One of them glided silently past Danny, paused, reversed its motion.

"You are in danger here," the metal thing said. "It is forbidden that humans enter the plant. There is harmful radiation."



"I'm sorry. I didn't know."

"You should return if you are human. You do not seem to be. Your brain is a new type to me. Have the brain-builders decided to dispense with the psi mechanisms?"

"No," Danny said. "I'm human. I'm shielded, that's all. You have access to psi information here then—"

"Of course. We have had it for years, everyone knows that. I myself spoke to the greatest parapsychologist of them all shortly after I was made. It is a source of satisfaction; not every robot can say he talked with Todd."

Danny started. Todd here? But—

"Yes, I did," the machine said, a note of petulance in its voice. "Actually and literally."

Wait a minute, Danny thought. Something was screwy here. This sequence was miles away from anything the PRS would set going.

But of course there would be some overlapping. That was the whole secret of the sequences. This one had a Todd in it. It probably also had a Danny Caiden in it. But they were as yet only fractionally real.

Danny felt a queer pang of regret. The probability was that this sequence was as remote from the main line as the others. Yet it was peaceful and prosperous apparently. It might be that some time in the future some elements of it might appear along the main line.

"I'll be—shuffling along," Danny said. "I've got to go up a step. Do you mind if I step on your tread?"

"You're climbing a sigma sequence?" the machine said. "That explains it. Some of us have suspected that we were not of a very high order of probability. I would advise you not to enter the next highest term. There is no Earth there."

"No Earth?"

"No," said the machine. "It will have been vaporized. A premature detonation of the Bethé effect. There is no Solar System either, for the shock wave of radiation from the Earth caused the sun to go nova."

"Oh, brother," Danny said. "They've really got me stopped then. I'll have to back down." Even as the words left his mouth, he realized that he didn't know how.

"But it is not necessary to take a physical step to change frames," the machine said. "Cannot you teleport

yourself across the gap?"

"Can't risk it," Danny said. "I'd be detected."

The machine sat silent and motionless in the humming hall. When it was not speaking it was hard to believe in its sentience. Finally it said, "It is forbidden me to use psi functions except in the operation of the matrix-engine. However, you are a formulation out of the matrix-series and cannot but be a disturbing factor. I will risk canceling you out. I do not estimate that they will junk me for it."

Before Danny had decided whether or not he wanted to be canceled the great hangar vanished.

*Five.*

**F**OUR inches from his nose, a glittering webwork of some intangible force hung. He could see nothing else. He tried to move, and the webwork flowed. It sheathed his whole body like a fiery cocoon. He could barely breathe.

A harsh voice said, "*Gotcha!*"

The webwork dimmed. Then it seemed to crawl and evaporate. A tall, hawk-nosed man with an unruly shock of blue-black hair was leaning against a table across a small, low-ceilinged room. In his hand he held a pistol-like object surmounted by a small square of mirror, neatly bisected by cross-hairs.

The man's triumphant expression changed slowly. He said, "You're not Berentz! Where is he?"

"I never heard of him," Danny said. He looked around. The small room was a laboratory of some kind but none of the apparatus was familiar. "I'm just a transient. Point that thing the other way will you?"

The tall man lowered the gun indecisively. "Is this some trick?" he said hoarsely. "No one but Berentz had a translation permit. We have thought-sealed guarantees from kinetetrans on four planets and a Prediction to boot. If you're making a Crossing illegally—"

"If what I'm doing is making a Crossing it's a cinch it's illegal," Danny said. "Luckily I don't know what you're talking about. Who is this Berentz?"

"Image-librarian for the Geronticists Charged with wholesale theft of alternate identities, and smuggling. Who are you, may I ask?"

Danny scratched his head. Any answer he could make might prove as incomprehensible to the tall man as the tall man's talk was to Danny. He said cautiously, "I'm from another set of sequences."

"Oh. Why didn't you say so? You romantics—always looking for ultimate reality. When are you going to learn that no sequence is stable?" He began to pace. "But you've upset my calculations and Berentz is probably out of range by now. It's a nasty business—that Tyrannosaur he turned loose on Ophe has walled off the whole star-cluster."

Danny was interested in spite of himself. "Tyrannosaur? From the past?"

"Where else would he have got it?"

"But they were supposed to have been stupid—brains the size of walnuts and so on."

"They were," the tall man said moodily. "But that was milnes ago when the time-rate didn't permit of physiochemical processes fast enough to sponsor intelligence. Put a man with the brains of a Caiden—"

"I beg your pardon?"

"Sorry—I forgot. No such person in your sequence, of course. He's a topological astrographer, a very difficult discipline. But put him back in the Carboniferous Age and he wouldn't think any better than a dinosaur. The energy-level of the plenum then wouldn't have permitted it. By the same token Berentz' Tyrannosaur is a shrewd article in our time. It's difficult to explain if your sequence doesn't have the Milne cosmology."

There was a puff of air to Danny's left. Another man stood in the room. He was an exact duplicate of the tall, black-haired man. And he had a gun.

"Hello, Zed," he said.

The first man looked him up and down. He said at last, "So you've stolen my alternate too, Berentz? You can congratulate yourself. Now they will never try you."

"I know," Zed's duplicate said. He grinned wolfishly. "The double-jeopardy law." He looked at Danny. "You have quaint friends. I don't like witnesses." He swung the gun on Danny and pulled the trigger.

The setting of the resonator prevented Danny from doing anything else about it—he had time to hurl Berentz

back into the previous sequence, the one where there was no Earth at all before the charge struck him—

*Six.*

There was nothing here—not blackness, but something deeper than blackness. Absolutely empty space. There were no words to describe that emptiness. Even a man who had been out between the stars could not have described it, for space-time is a plenum, a fulness, awash with the steady beating of electromagnetic and gravitic impulses, crammed to bursting with positrons, expanding like a balloon with the pressure of its fullness. Here there was only empty space.

After a long time Danny realized that he had reached his goal. This was the sequence that the Brotherhood of the PRS had emptied of meaning—the sequence it had emptied of the very tissue of space-time. Without that ground-matrix, the psi faculties were helpless.

The PRS could license favored people to access to new sequences or deny licenses at will. Probably this sequence was an end-product—not what would prevail in the PRS *now*, but what the PRS would establish centuries hence.

And in it Danny and Todd alike were trapped.

## CHAPTER XI

### *Dark Victory*

**D**ANNY turned helplessly in the emptiness. A faint twinge of dizziness told him that he still had his physical body; the semi-circular canals of his inner ear were registering shifts in the inertia of the fluid they contained. The resonator then was still on the job. It was holding him firmly fixed to a single frame of this sequence as it had held him in the others.

A glimmer of light began in the void. It grew. It was a human face.

It became Mall.

The vast lips opened and a soundless voice said, "Your death is long delayed, Danny."

"I'm not dead yet," Danny said doggedly.

The glowing face smiled. "Your

death is no longer necessary. My predictions show that you cannot escape from this space. But I will not risk your flouting my predictions again."

The face drew closer, the narrow eyes glowing white-hot.

In that timeless instant, Danny remembered. In his memory was the desolation and terror of a world where there were no men and the savage loneliness of a carrion crow which had fed long ago upon its last victim. Two soldiers upon a high tower moved in his memory, accepting as normal the teleportation of armies.

A tentacled metal being upon caterpillar treads murmured, "A formulation out of the matrix-series . . . disturbing factor . . . cancel . . ." In a skipped sequence the roiling of the hydrogen-helium process that was the Bethé reaction stirred thin gases that had once been Earth. And a hawk-nosed man reminded Danny that no sequence was ultimately stable.

All this was concentrated by the resonator into a single frame. Danny marshaled it, and launched it. The glowing face of Mall twisted and vanished.

But Danny could feel Mall's presence, gathering itself. Mall had been able to defeat Sean and the last blow that Danny could strike had been launched. Mall was still alive somewhere. He was coming back.

The darkness began to rock. Far away there was a pinpoint of light. Mall's face grew in the invisible turmoil. This time he was not shouting for Sir Lewis and Schaum and the others. His eyes burned destruction through the universe.

A sound like the ripping of metal screamed out somewhere behind the swelling head. A jagged line of light, like lightning frozen in mid-stroke, split the blackness. Then the divided sable curtain was torn aside, and light and reality spilled through.

In the rent Todd rode a machine. It was half searchlight and half siege-gun. Todd crouched over it in the stirrups of a bucket-seat.

"Danny! *Hold him!*"

The resonator was hot in Danny's hand. Somehow he got the cover off it, and the second screw turned to its final point. The blackness faded, and the sequences that he had visited took their

proper fractional reality in his mind. That reality was partial—but it was real. The inane sequence cracked and fell away. Mall staggered on the floor of the attic and fought for a foothold.

"Hold him!"

The sixfold impulse, backed by the power of Sean's resonator, slammed out at Mall. The blow was not quite enough. Still Mall came across the floor boards, one painful step after another.

The machine that Todd was riding swung down upon him. A vortex of dancing lights fountained out of it.

For an instant Mall was silhouetted against that impossible fountain. Then shadow-figures of Mall began to bleed away from his rigid body by the hundreds, by the thousands.

After awhile there was nothing left of Mall—nothing at all.

"Scattered," Todd said calmly. "One integer in every sequence—but no concentration on the main line. He's only a spread of characteristics now—a matrix in probability. He can never be integrated again."

Danny looked around the garret. It was empty except for Todd and the machine.

"There's still Sean," he said at last. "Where did they have you? I'd thought you were in that empty space."

"I was," Todd said, "but in the beginning of it. You and Mall were fighting at the end of it. They had figured that I wouldn't be able to operate directly on the serial universe—I have no talent for it, it seems—but they forgot that I could assemble machinery to act for me.

"They hid me in their own laboratories, along the beginning of their own sequence. It was the best thing they could have done. I'll never be a psi-man but you'd be surprised at the way I can throw the psi forces about when I have proper equipment!"

"Nothing surprises me," Danny said. "Not now. But we'll need Sean. And Marla. We still have to bring the sequence Sean wanted onto the main line."

"We just did," Todd said. "This is it."

**F**OR a moment Danny stood stunned. "Are you sure?" he said at last. "By the way, are we on the main line now or aren't we?"

"Yes, to both," Todd said. "The de-



struction of Mall reduces the PRS sequence to a very low order of probability. He was their key man. I confess I had no hope of your getting this far or being able to pin Mall down for me when you did. But the energy I expended in scattering him has established the sequence your friend wanted very solidly on the main line."

The scientist patted the machine affectionately. "This thing was intended to drag what I'd learned out of me—a finished version of our barber's-chair-cum-encephalograph. They didn't expect you to get so far either or they'd never have left me alone with it."

"There's probably another reason," Danny said thoughtfully. "If you stick yourself off in a sequence where your wishes are already fact you aren't going to be able to foresee actual outcomes. No wonder Mall's 'predictions' didn't work out. They were just projected wishes."

He turned. The stairway to the first floor was behind him. It was just a simple stairway, with nothing to show that it had been a well of confusion a few moments before. A smell of burned insulation and hot ozone came up it. Danny chuckled.

"Whatever it was that created that field it's burned out but good," he said. "Let's go—we've still got a score to settle with Sir Lewis."

But the downstairs rooms were deserted. Danny prowled through them. In the largest of all the nap of the carpet was pressed flat in several spots, in regular rectangles. Danny scuffed at one of them with the toe of his shoe.

"Those are what I wanted," he said gloomily. "Their files. It didn't hit me before but must have been the PRS that was playing precognition on the market." He fell silent, exploring the area with the psi faculties. Previous frames showed the filing cabinets all right. The electrons of carpet and wall "remembered" them.

Then, dimly at first, the same pattern began to show through elsewhere; another, and very familiar electronic area was recording the presence of the cabinets. He was tantalizingly close to recognizing it but the picture would not come all the way through—

"Danny."

"Um?"

"Come here a minute. Is this the man

you called Sean?" Todd was standing in the doorway to the cellar. With a sudden chill of anticipation, Danny followed him down the steps.

Sean was lying on a collapsible pallet toward the back of the cement-walled room. He was dead.

"I'm surprised," Danny said bitterly, "that they didn't take the body with them. I'm going to place charges against Sir Lewis as an accessory."

"How can you? I gather you were an eye-witness but from the looks of the wound they must have got him in some way the courts wouldn't believe."

"It could as easily have been a hot poker," Danny said savagely. "They must have had some other reason."

Todd bent over the body and lifted it, at first gently, then with all his strength. "I—see why," he panted. "He can't be lifted. He must have done it himself, somehow, before he died. He's got about ten tons of inertia, at a guess."

Danny tried it himself. The body would not move by a fraction of an inch. Suddenly Danny guessed the truth. Carefully he explored the dead man's mind.

The key was deeply buried, almost masked by the rapid disintegration of the brain cells. But once he hit it the tight knot of energy was unmistakable. It was triggered to Danny and to no one else. The moment he reached it, it dissipated.

"That does it," Todd said, moving Sean's hand experimentally. "He locked himself down here for you?"

"Yes. He was a great man, Dr. Todd. He spoke of two great problems that his group was working on. One of them was a sort of psychic fission effect—the same thing, I think, that you accomplished with Mall. He didn't mention the other one but I know now what it must have been."

"What?" Todd said quietly.

"Death."

He turned, his mind reaching out again for the electronic "set" of the filing cabinets. The PRS building was a logical guess but a wrong one. Why was the new location so maddeningly familiar?

And then he had it. The files were in his own apartment. Sean must have stolen them the moment he had got into the hide-out and teleported them back.

Small wonder that the PRS had cut and run when Todd had been freed.

THE reception Danny got at the apartment was nothing short of royal. The place was full of F.B.I. men, and the F.B.I. men's hands were full of papers. By the looks of the place, they must have been rifling the files for hours. The agent Danny had seen before grinned at him from the big chair.

"Neat trick," he said. "How did you do it?"

"I had help," Danny said. "I'm not under arrest?"

"Technically, technically," the F.B.I. man said, waving the matter away. "But only as a witness. The stuff here will satisfy the Grand Jury for a long, long time. Do you know where we can lay hands on Carter?"

"No," Danny said. "And I doubt that you could keep him in jail for ten minutes."

"Because he's a teleport?"

Danny's eyes widened. "Don't tell me you accept that!"

"I was here," the agent said a trifle grimly, "when these cabinets arrived out of thin air. I have to believe what I see, especially when I've got a broken toe to back it up."

Danny remembered the resonator. He took it out and handed it over. "I won't be needing this any more," he said. "Dr. Todd can show you how to build more. It's kept a better man than Sir Lewis in the pokey."

"You're bragging," Todd said. "But you're right. Where's Marla?"

"Hiding in the closet," Danny said.

Marla came out, pouting. "You and your darned trickery," she said. "How can a woman have any secrets from a man like that?"

"A woman with a guilty conscience has no business dallying with a telepath," Danny said, grinning.

"You can just go—go—" She seemed unable to think of anything likely to prove fatal to Danny. She stomped out of the room. Danny followed. When she stopped indecisively, Danny plucked at her sleeve.

"I'm sorry, Marla. I was only teasing."

"Prove it," she said, a dangerous glint in her eye.

"How? Shall I throw some furniture around?"

"No, doggone it!" she said. "Do something simple that a girl can understand, for once, instead of scaring her into fits."

Danny made a hollow tube of his tongue and made a noise like a turtle-dove. As an afterthought he drew out the glass tube from one of his emperor-sized cigarettes and made a noise like a steamboat whistle. The glint simply became more dangerous than ever.

"Well," Danny said, "I can only think of one other expedient." He kissed her soundly.

SOME moments later Marla removed his arms firmly, and stepped back against the wall. "You've got to realize, Danny, that I'm serious about this psychic business," she said. "I'd be scared, living with it."

"But Marla—there's nothing abnormal about the psi faculties. Everybody has them to some degree."

"I don't want any part of them," Marla said. "If you really want me to marry you you'll have to give them up, Danny. I don't want to be a stinker about it but I can't help myself. It scares me too much."

"How do you give up an ability?" Danny asked reasonably. "It would be like giving up my eyesight. I'm not even sure it could be done. Surgery might do it but it would probably make an idiot of me now that full cortical connections have been established."

He added dubiously, "You see how it is. But anyhow I could be careful not to teleport anything or use any kind of psychokinesis or extra-sensory perception around you—it's probable that I won't have the chance at a sigma-sequence again."

Marla stamped her foot and turned her back on him.

Danny swallowed.

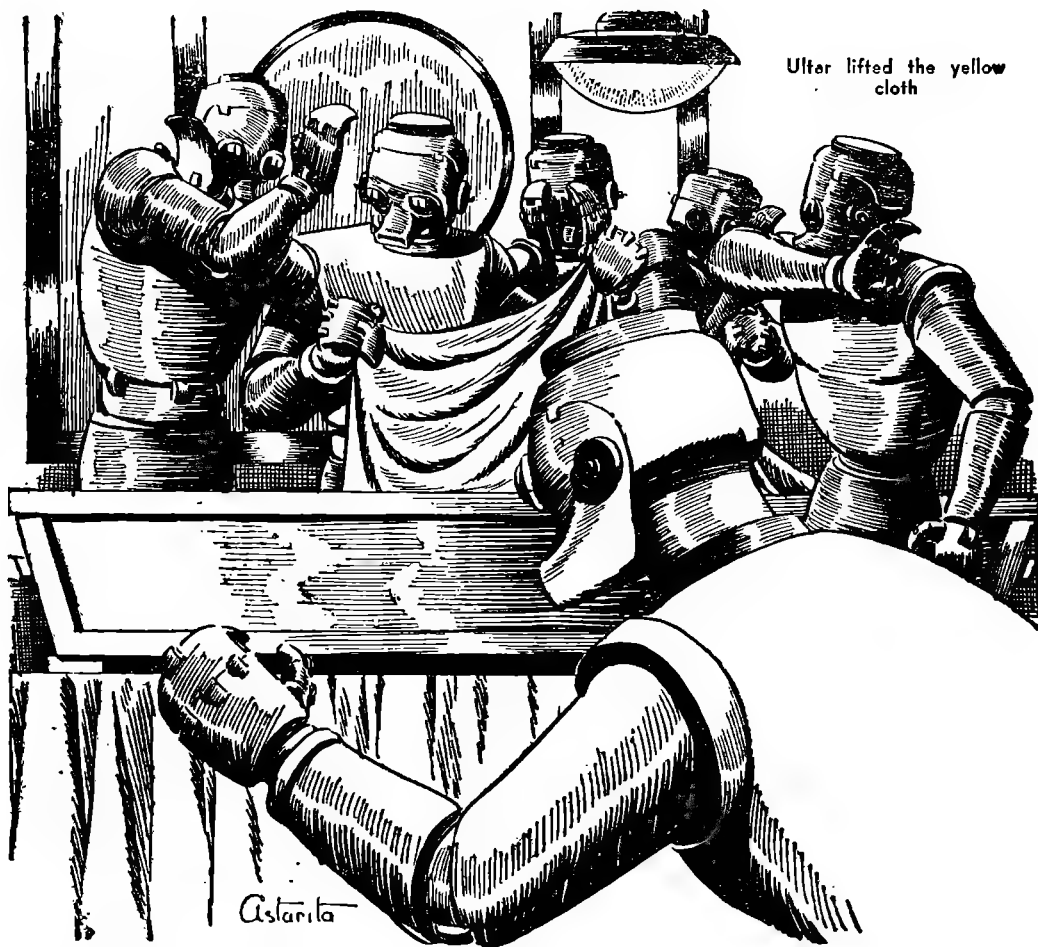
"Have it your way," he said. He went back into the apartment. Not even the psi faculties were much good for understanding a woman.

A moment later, through a gray fog of disappointment, he heard her calling in a small voice through the door.

"Danny."

"Yes?"

"Please come back out again." She sounded slightly strangled. "And kiss me again. Only this time *open the door before you walk through it!*"



Ultrar lifted the yellow cloth

# A Blade of Grass

By RAY BRADBURY

**I**T HAD been decided already that Ultrar was guilty. The members of the Council sat, luxuriously relaxing as the attendants lubricated and oiled their viselike hands and their slender metal joints.

Kront was most vehement of the seventeen. His steel hand snapped and his round gray visuals flamed red.

"He's an insufferable experimental-

ist," said Kront. "I recommend the Rust!"

"The Rust?" exclaimed Ome. "Isn't that too drastic?"

Kront thrust his alloyed skull-case forward.

"No. Not for ones like him. He'll undermine the entire Obot State before he's finished."

"Come now," suggested Lione, philo-

**Robot Scientist Ultrar Rediscovered Protoplasm!**



sophically. "It would be better to short-circuit him for a few years, as punishment. Why be so sadistic and bitter about it, Kront?"

"In the name of the Great Obot!" said Kront. "Don't you see the danger? Experimenting with protoplasm!"

"I agree," said one of the others. "Nothing is too severe a punishment. If Ultar insists on concluding his present experiments, he may undermine a civilization that has existed for three hundred thousand years. Take Ultar out to sea, unoiled, and fully aware. Drop him in. It will take him many years to Rust, and he will be aware, all of those years, of crumbling and rusting. Be sure that his skull-case is intact, so his awareness will not be short-circuited by water." The others trembled a quiet, metal, hidden trembling.

Kront swayed to his feet, his oblong face gleaming ice-blue and hard. "I want a show of opinion, a vote. The Rust for Ultar. Vote!"

There was an indecisive moment. Kront's fifteen feet of towering, alloyed metal shifted uneasily in the lubrication cell.

Vises came up, arms came up. Six at first. Then four more. Ome and five others declined to vote. Kront counted the vises with an instantaneous flare of his visuals.

"Good. There's an express rocket for Ultar's laboratory in one hundred seconds from Level CV. If we hurry we'll make it!"

Huge, magnetic plates clung to the floor as metal bodies heaved upward with oiled quiet.

They hurried to a wide portal. Ome and the five dissenters followed. He stopped Kront at the portal. "There's a thing I want to ask you, Kront."

"Hurry. We haven't time."

"You've—seen it."

"Protoplasm?"

"Yes. You've looked at it?"

Kront nodded. "Yes. I have seen."

Ome said, "What is it *like*?"

Kront did not answer for a long moment and then he said, very slowly. "It is enough to freeze the motion of all Obot Things. It is horror. It is unbelievable. I think you had better come and see this for yourself."

Ome deliberated. "I'll come."

"Hurry then. We have fifty seconds."

They followed the others.

THE sea lay quietly as a huge, pallidly relaxed hand. In the vein and artery of that vast hand nothing moved but the gray blood tides. Moved silently and with the motion of one lunar tide against another. The deeps were not stirred by any other thing. The sea was lifeless and clear of any gill or eye or fin or any moving thing save the soft sea dust which arose, filtering, when the tides changed. The sea was dead.

The forests were silent. The brush was naked, the trees high and forlorn in a wilderness of quiet. There were no bird songs, or cracklings of sly animal paws in autumnal leaves, there were no loon cries or far off calls of moose or chipmunk. Only the wind sang little songs of memory it had learned three hundred thousand years before from things called birds. The forest and the land under the forest was dead. The trees were dead, turned to stone, upright, shading the hard stony soil forever. There was no grass and no flowers. The land was dead, as dead as the sea.

Now, over the dead land, in the birdless sky, came a metal sound. The sound of a rocket singing in the dead air.

Then it was gone, leaving a vein of pale gold powder in its wake. Kront and his fellows, on their way to the fortress of Ultar. . . .

A door opened as the ship landed. Kront and the others came forth from the ship.

"I've been waiting for you," said Ultar, standing in the open portal of the laboratory. "I knew you'd bring the Council with you, Kront. Step in, all of you. I can tell by the immediate temperature of your bodies, that I am already condemned to Rust. We shall see. Step in, anyway."

The door rang shut behind the Council. Ultar led the way down a tubular hall which issued forth into a dark room.

"Be seated, Obot Rulers. It is an unusual thing, this reception for the Great. I am flattered."

Kront clicked angrily. "Before you die, you must show us this protoplasm, so it can be judged and destroyed."

"Must I? Must you? Must it?"

"Where is it?"

"Here."

"Where?"

"Patience, Kront."

"I've no patience with blasphemers!"

"That is apparent."

In one corner of the room was a large square box, from which a glow illumined the nearby walls. Over the box hung a yellow cloth which hid the contents from view.

Ultrar, with a certain sure sense of the dramatic, moved to this box and made several adjustments of heat-dials. His visuals were glowing. Grasping the yellow cloth, he lifted it up and away from the box.

A hard, rattling tremor passed through the group. Visuals blinked and changed color. Bodies made an uneasy whining of metal. What lay before them was not pleasant. They drifted forward until they circled the box and peered into it. What they saw was blasphemous and sacrilegious and more than horrible.

Something that *grew*.

Something that expanded and built upon itself, changed and reproduced. Something that actually lived and died. Died.

How silly! No one need die, ever, ever!

Something that could rot away into nothingness and run blood and be tortured. Something that felt and could be burnt or hurt or made to feel hot or cold. Silly, silly something, horrid, horrid something, all incomprehensible and nightmarish and unpredictable!

Pink flesh formed six feet tall with long, long fleshy arms and flesh hands and two long flesh legs. And—they remembered from myth-dreams—those two unnecessary things—a mouth and nose!

**O**ME felt the silent cogger within himself grind slow. It was unbelievable! Like the half-heard myths of an Age of Flesh and Darkness. All those little half-truths, rumors, those dim little mutterings and whispers of creatures that grew instead of being built!

Who ever heard of such blasphemy? To grow instead of being built? How could a thing be perfect unless it was built and tendered every aid to perfection by an Obot scientist? This fleshy pulp was imperfect. The least jar and it broke, the least heat and it melted, the least cold and it froze. And as for the amazing fact that it grew, well, what of that? It was only luck that it grew to be anything. Sheer luck.

Not so the inhabitants of the Obot State! They were perfect to begin with and grew, paradoxically, more perfect as

time progressed. It was nothing, nothing at all for them to exist one hundred thousand years, two hundred thousand years. One himself was past thirty-thousand, a youth, still a youth!

But—flesh? Depending upon the whims of some cosmic Nature to give it intellect, health, longevity? How silly a joke, how pointless, when it could be installed in parcels and packages, in wheels and cogs and red and blue wires and sparkling currents!

"Here it is," said Ultrar, simply, and with pride. He said it with a firmness that was unafraid. "A body of bone and flesh and blood and fantasy."

There was a long silence in which the metal whining did not cease among the stricken Council. There was hardly a flicker of movement among them. They stared.

Ome said, "It is frightening. Where did you get it?"

"I made it."

"How could you bring yourself to *think* of it?"

"It is hard to say. It was long ago. Ten thousand years ago, when I was walking over the stony forests, alone, one day, as I have often done, I found a blade of grass. Yes, one last small blade of green grass, the last one in all of this world. You can't imagine how unbearably excited I was. I held it up and I examined it and it was a small green miracle. I felt as if I might explode into a million bits. I took the grass blade home with me, carefully, and telling no one. Oh, what a beautiful treasure it was."

"That was a direct violation of the law," said Kront.

"Yes, the law," said Ultrar remembering. "Three hundred thousand years ago when we burned the birds in the air, like cinders, and killed the foxes and the snakes in their burrows, and killed fish in the sea, and all animals, including man—"

"Forbidden names!"

"Remembered names, nevertheless. Remembered. And then we saw the forests still grew and reminded us of growing things, so we turned the forests to stone, and killed the grass and flowers, and we've lived on a barren stony world ever since. Why, we even destroyed the microbes that we couldn't see, that's how afraid we were of *growing things*!"

**K** RONT rasped out, "We weren't afraid!"

"Weren't we? Never mind. Let me complete my story. We shot the birds from the sky, sprayed insects from the air, killed the flowers and grass, but yet one small blade survived and I found it and brought it here, and nurtured it, and it grew for hundreds of years until it was ten million blades of grass which I studied because it had cells that grew. I cannot tell you with what excitement I greeted the blossoming of the first flower."

"Flower!"

"A little thing. A blue flower, after a thousand years of experiment. And from that flower more flowers, and from those flowers, five centuries later, a bush, and from that bush, four hundred years later, a tree. Oh, it's been a strange long time of working and watching, I'll tell you."

"But *this*," cried Kront. "How did it evolve to this?"

"I went looking. I scoured the world. If I found one precious blade of grass, I reasoned, then perhaps I can find another thing, a lizard that had escaped, or a snake, or some such thing. I was more than lucky. I found a small monkey. From there to this is another thousand years and more. Artificial breeding, insemination, a study of genes and cells, well, it is here now, and it is good."

"It is forbidden!"

"Yes. Damnably forbidden. Look, Ome, do you know why flesh was eradicated from the Earth?"

Ome deliberated. "Because it threatened Obot Rule."

"How did it threaten it?"

"With the Rust."

"With more than the Rust," replied Ultar, quietly. "Flesh threatened us with another way of life and thought. It threatened us with delightful imperfection, unpredictability, art, and literature, and we slaughtered flesh and made it blasphemy and forbidden to see flesh or speak of it."

"Liar!"

"Am I?" demanded Ultar. "Who owned the world before us?"

"We've always owned it. Always."

"What about flesh? Explain it?"

"It was an experiment that got away from us for a time. Some insane Obot scientist created monster flesh and it

bred, and it was the servant of the Obots, and it overthrew Obot Rule for a time. Finally, the Obots had to destroy it."

"Religious dogmatism!" replied Ultar. "You've been taught to think that. But, know the truth. There must've been a Beginning, do you agree?"

"Yes. There was a Beginning. The Book of Metal says that all the Universe was turned out on one Lathe of one Huge Machine. And we the small Obots of that Lathe and that Machine."

"There had to be a first Obot, did there not?"

"Yes."

"And who built him?"

"Another machine."

"But before that, at the very beginning? Who built the machine that built the Obot? I'll tell you. Flesh. Flesh built the first machine. Flesh once ruled this continent and all continents. Because flesh grows. Machines do not grow. They are made piece by piece—they are *built*. It took a *growing* creature to build them!"

Ome went wild. "No, no. That is a terrible thought!"

"Listen," said Ultar. "We could not stand man and his imperfect ways. We thought him silly and ridiculous with his art and music. He could die. We could not. So we destroyed him because he was in the way, he cluttered up our perfect universe. And then, we had to lie to ourselves. In our own way we are colossally vain. Just as man fashioned God in his own image, so we had to fashion our God in *our* image. We couldn't stand the thought of Man being our God, so we eradicated every vestige of protoplasm on Earth, and forbade speaking of it. We were Machines, made by Machines, that was the All, and the Truth."

He was finished with his speaking. The others looked at him, and at last Kront said, "Why did you do it? Why have you made this thing of flesh and imperfection?"

"Why?" Ultar turned to the box. "Look at him, this creature, this man, so small, so vulnerable. His life is worth something because of his very vulnerability. Out of his fear and terror and uncertainty he once created great art, great music and great literature. Do we? We do not."

"How can a civilization create when



it lives forever and nothing is of value? Things only take value from their evanescence, things are only appreciated because they vanish. How beautiful a summer day is that is only one of a kind; you all have seen such days—one of the few things of beauty that we know, the weather, which *changes*. We do not change, therefore there is no beauty and no art.

"See him here, in his box, dreaming, about to wake. Little frightened man, on the edge of death, but writing fine books to live long after. I've seen those books in forbidden libraries, full of love and tenderness and terror. And what was his music but a proclamation against the uncertainty of living and the sureness of death and dissolution? What perfect things came from such imperfect creatures. They were sublimely delicate and sublimely wrong, and they waged wars and did many bad things, which we, in our perfectness cannot understand.

"We cannot understand death, really, for it is so rare among us, and has no value. But this man knows death and beauty and for that reason I created

him so that some of the beauty and uncertainty would return to the world. Only then could life have any meaning to me, little as I can appreciate it with my limited faculties.

"He had the pleasure of pain, yes, even pain a pleasure, in its own way, for it is feeling and being alive; he lived, and he ate, which we do not do, and knew the goodness of love and raising others like himself and he knew a thing called sleep, and in those sleepings he dreamed, a thing we never do, and here he is now, dreaming fine things we could never hope to know or understand. And you are here, afraid of him and afraid of beauty and meaning and value."

The others stiffened. Kront turned to them and said, "Listen, all of you. You will say nothing of what you've seen today, you will tell no one. Understand?"

The others swayed and moaned in a dazed, wavering anger.

The sleeper in the long oblong box stirred, fitfully, the eyelids quivered, the lips moved. The man was waking.

"The Rust!" screamed Kront, rushing forward. "Seize Ultar! The Rust! The Rust!"

FEATURED NEXT ISSUE

## WHEN TIME WENT MAD

*A Brilliant Complete Novel*

by

DIRK WYLIE and FREDERIC ARNOLD KUMMER, JR.

### *Message from Garcia*

*Texas Artist Tells Why It's  
Smart to Switch to Calvert*

SAN ANTONIO, Texas—Tony R. Garcia, San Antonio artist and illustrator, knows that it's *taste* that counts in a whiskey. "Tell everybody," he says, "that I switched to Calvert because of its *mild, and smooth taste*."

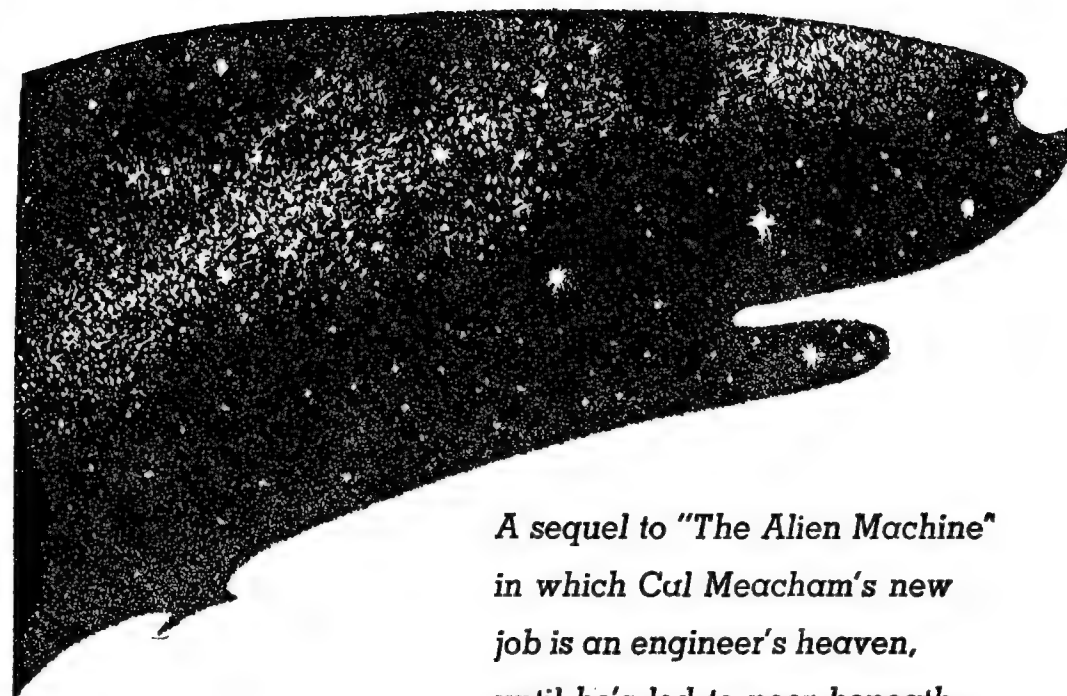


CALVERT RESERVE BLENDED WHISKEY—86.8 PROOF—65% GRAIN NEUTRAL SPIRITS. CALVERT DISTILLERS CORP., N.Y.C.

Ruth raised her eyes to  
follow his gaze out into  
the distant star field



Ruth raised her eyes to follow his gaze out into the distant star field



*A sequel to "The Alien Machine"  
in which Cal Meacham's new  
job is an engineer's heaven,  
until he's led to peer beneath—*

# the Shroud of Secrecy

## CHAPTER I

### *End of a Dream*

**H**E must have slept during part of that fantastic night flight. He could remember only the incessant thunder of the engine in front of him and the starlit sky of night above. He remembered the tumultuous flashes of lightning as the ship skirted a vast thunder storm and his fear of being plunged into its depths. But the ship had steered past, far off course, and then returned to its heading like some sentient thing.

Now daylight was racing him out of the east, lighting the cirrus miles above him and shading the desert below. Still the ghostly ship gave no sign of slowing its determined flight.

His hands and feet searched with involuntary constancy for the absent controls. It gave him a sick sense of help-

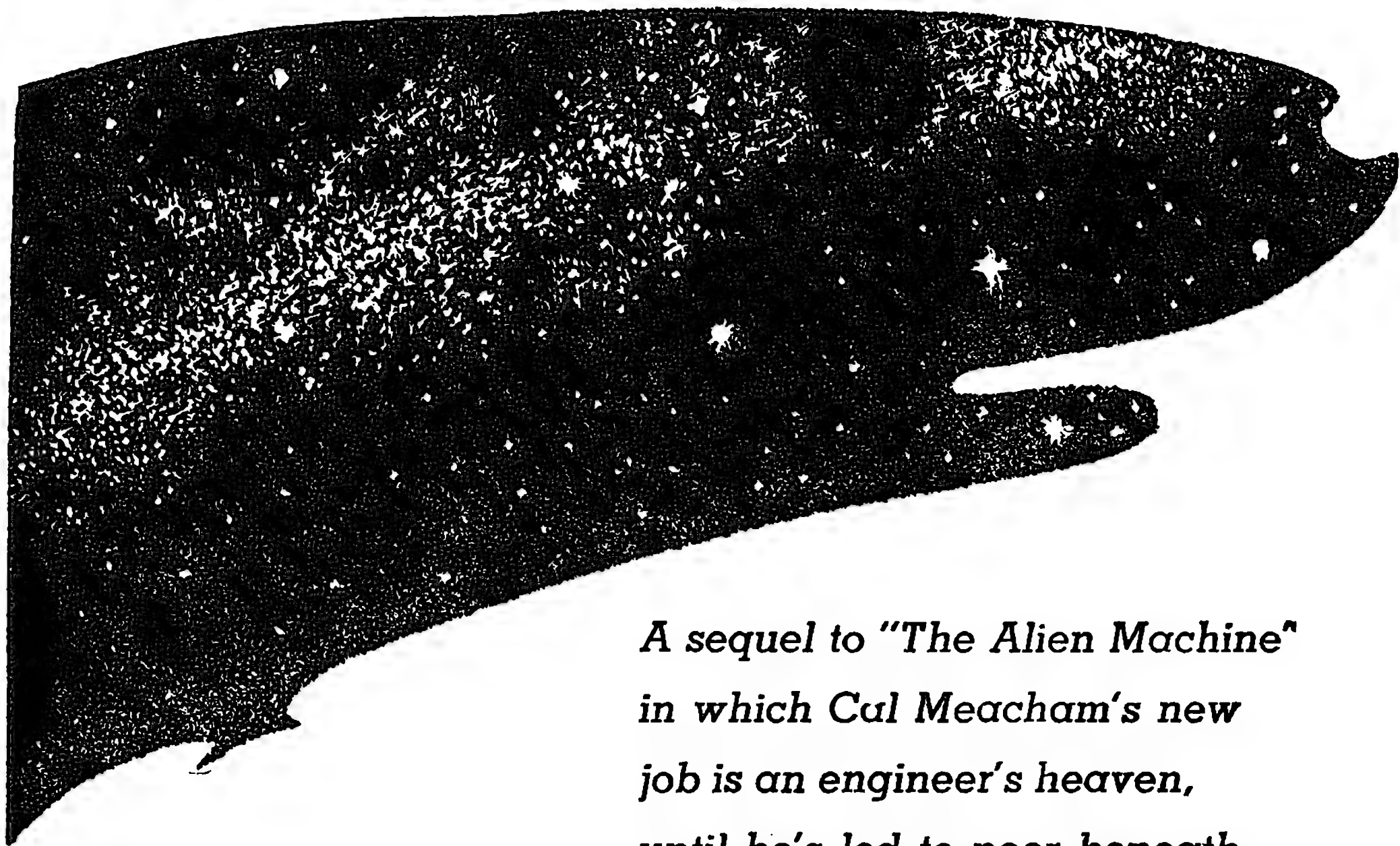
less imprisonment when he considered that utterly blank cockpit in which he rode. Not a control, not a single instrument—only the thunder of the motor and the propeller and the shriek of the air.

He looked over the edge at the brightening landscape below. About eight thousand feet up, he thought. He strained to recognize familiarity in the terrain below. It looked like cattle country. It might be Oklahoma, Texas, New Mexico or Arizona. Distant cliffs of shining vermillion made him fairly certain that it was a Southwest region, probably in one of the latter two states.

While the sun overtook him Cal Meacham watched the passage of tiny towns, the puff of occasional whirlwinds

**a novelet by RAYMOND F. JONES**





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on the desert, the creeping cars that sometimes appeared on a distant highway.

Then, suddenly, the plane dipped. In a moment of involuntary panic, Cal reached for the absent stick, listened critically to the thunder of the motor. Twisting around, he glanced at the elevators. They were depressed to lose altitude.

He scanned the horizon ahead and the vast empty land below. Fat humps of mountains projected from the desert. Then he saw in the distance the haze that hovered over some desert city. The ship seemed to be heading for it.

He did not know this country well. There was no familiarity about it. As the plane approached the town he saw that he was not headed directly for it after all. The ship was going north towards a small valley that lay on the other side of low humped mountains.

In the valley were a cluster of buildings. Several hundred houses surrounded a plant composed of four long blank-walled structures and a fifth, much larger, that was in the process of construction.

The plane soared over the plant and circled twice. A small landing field was just west of the four buildings. There was a hangar there with a sock hanging limp in the windless air. Nearby was a small building that crouched beneath a giant antenna, a great bowl-like screen that turned slowly on gimbals, ever pointing—straight toward the little plane in which he rode.

The control, he thought—All through those dark hours this mass of metal had been the mysterious beacon that guided the plane.

There were a half dozen men watching the ship from the field but not with any apparent curiosity. They had the appearance of waiting for a routine flight to be completed.

Dust spurted from the earth as the wheels touched. Cal watched the flaps go down and sensed the dragging hand that slowed the ship. It taxied up to the apron before the hangar. The motor died and grunted to a stop in the shadow of the great bowl of the guiding antenna.

**I**T was like the end of a dream in which a sense of sleep still prevails over the senses. He saw the men approaching, saw their mouths move in

greeting, but he made no move to stir. One of the mechanics climbed to the wing step and shoved the canopy back. The fresh coolness of the morning desert air brushed his face.

"Did you have a good trip, sir?" The mechanic was smiling. Just a kid in white overalls, he didn't seem awed by the landing of a ship without controls.

Cal nodded. "No complaint about the trip. But I would like to know where this is."

"That was Phoenix, Arizona, you saw coming in. We're just north of town."

Cal grunted as he rose stiffly and climbed out. "That's something. I was afraid I was going to end up on Calabulaska Island where the meemies eat the white people."

"I don't blame you for getting the willies out of a ride like that. I don't want any of it myself. The beam is used mainly for a lot of other things but I guess the Engineer figured he might as well use it to pick up new employees as well."

"The Engineer?"

"The boss of the whole place. I've never even seen him myself. He isn't around much. His name is Mr. Jorkovnosnitch or something like that, and he doesn't call himself president or anything like that, just Engineer. So that's what everybody else calls him too, because they forget how to pronounce his name."

His knees buckled a trifle as Cal jumped from the wing to the ground. He stood a moment to steady himself and looked over the landscape. The people looked human. The plant looked like a lot of other medium sized industrial plants set out near some small city for decentralization purposes.

But the plane behind him, that towering beam director that was now stilled—these belied the appearance of normalcy. These and a director who called himself simply the Engineer and manufactured devices employing a completely alien technology—

There was a stir among the men. All eyes were suddenly directed a short distance down the field. When Cal's followed, he no longer wondered why. A slim dark-haired girl was approaching them. She wore a white tailored suit whose severity was relieved by the gentle fluffing of her hair as she walked swiftly towards them.

She held out a hand towards Cal as she came up. "I'm Dr. Adams. Dr. Ruth Adams," she added as if to invite a more friendly level of acquaintance than that stiff "Dr." would imply.

"I'm Cal Meacham," he said, "but I suppose you know that—"

He stopped awkwardly. The girl's hand in his felt icy cold. It was firm and competent but—almost imperceptibly—it trembled.

He glanced down. She withdrew it quickly and smiled. "I know quite a bit about you. I'm assistant in the employment department and your files were referred to me for analysis. My doctorate is in psychiatry."

"Yes—yes," he said absently. He was watching her face, narrowing his field of vision to block out the gentle lips, the firm molded cheeks, tinted softly with desert tan—narrowing to her eyes. They were big and soft brown in tone.

And the utter fear that dwelt in them was like an electric shock through his body.

Only when he concentrated on her eyes did he get that intense message of fear she could not hide. But she was so constantly animated that he could not long hold to such a narrow field of vision.

He attempted a smile to break the awkward pause he had created. "This seems to be purely a routine affair to the boys here but it's quite a jolt for me. I'd like to know what this is all about. I spoke to a man over a device called an interocitor. I didn't learn his name but he offered me a job and I took him up on it. He sent this pilotless plane for me and here I am."

"Yes, that was Dr. Warner who spoke with you," said Ruth. Cal found it impossible to think of her as Dr. Adams. He dropped the title out of mind and regarded her in terms of first name only.

"I work under him," she continued. "He selects all engineers. He was so pleased by your aptitudes and your work that he sent me out personally to bring you to him. Ordinary employees rate only an office boy."

She assumed an attitude of mock regality and they burst out laughing together. Cal almost forgot the fear he had seen in her eyes.

"I appreciate the special attention," he said. "A freckle-faced office boy certainly would have spoiled my day."

"Come with me. I'll take you to Dr. Warner now."

He found it the most natural thing in the world to take her arm lightly as she led the way over the dust-covered apron of the hangar towards the nearest of the four plant buildings. Even in that bright sunlight he felt a faint tremor in her body—as if with cold.

DR. WARNER looked much as he had on the screen of the interocitor tube. A few sparse strands of white hair still adhered to the middle of his pate. A gently protruding paunch was beginning to tell the effects of years at a desk. Yet his face had the baby-pink tinge of a man used to days out of doors.

He advanced with outstretched hand as soon as Ruth Adams entered his office with Cal in tow. "Mr. Meacham!" He pumped Cal's hand vigorously. "Please sit down. You too, Ruth."

"You want to know all about us, of course," said Dr. Warner. "You want to know our purposes, our means of operation, who we are, why we are, what we intend to do, what we expect of you and in general where you go from here."

"I guess that would just about cover it," said Cal. "You've been asked those questions before."

"Many times. And all of them can be answered in good time. I think you can realize, however, that your initial period here will be in the nature of a probation. The answers to your questions will be given gradually. I'm sure that's reasonable."

"Of course."

"I told you that we are an organization of engineers and scientists who believe that the world could better utilize the productions of science if scientists themselves placed some restrictions on the use of their talents. Among us are those who have been sickened by the use that has been made of the products of our research. In effect we are on strike against such destructive uses. We propose to withhold and control the products of our research from here on."

"Already, we have uncovered principles and invented devices that the military cliques of the world would give their eyes for, provided they knew we had them."

"But how can such principles be utilized without being revealed to the military?"



"Some can't. Those are suppressed. Others are released with such controls as will insure their proper use. The interocitor is an example of this."

"How?"

"It is a superb communication device, surpassing common radio principles in a thousand ways. But it can be instantly blanked out or totally destroyed—as you witnessed—the moment it is used for communicating lying propaganda or anything else harmful to the mind of man."

"You consider yourselves censors of all that man does!"

"No—merely of the uses to which our inventions are put. That right of censorship is inherent in the invention or discovery, we submit. Until now it has never been enforced."

"That's a pretty big order."

Warner smiled. "Sometimes we think we are pretty big men. At least we operate on that principle with the silent hope that we just don't get too big for our pants. Somebody had to make the attempt. We are doing it—and rather successfully so far. The militarists would be appalled if they knew the brain power that we have succeeded in draining away from their murderous projects. Including yours—"

"I don't think they will miss me much. I was already—on strike, as you say."

"That's what I mean. So were thousands of others. We are men who are not interested in science for the sake of 'pure' science, whatever that is. We are interested in science as a tool in man's rise from the ape to whatever goal may be possible when his vast potentialities are fully realized. Those who have not come very far from the ape are using that tool with destructive effects which must be curbed. That sums our entire purpose. You are in agreement, of course."

Cal Meacham nodded slowly. "And doubtful of any man's ability to achieve such a purpose—at least in our day."

"We shall try to convince you as we proceed," said Dr. Warner. "But now for your duties here. You have seen the plant under construction behind these buildings. That is nearly completed and is to be an interocitor assembly plant. We want to assign you in charge of that plant."

Cal stared as if he hadn't heard cor-

rectly. "In charge—of that plant!"

"Yes. That is correct."

"But I'm just a lab punk. I was only a project engineer at Ryberg. I haven't had much of a background for that sort of thing."

"We've investigated your background quite thoroughly. We are satisfied with your qualifications. You will receive an intensive training by the design engineers who produced the interocitor and by the production men now handling it. You will be amply prepared for the job. You will take it, of course."

Cal smiled. "I wish you would put a question mark at the end of one of those statements about me. I get the uncomfortable feeling you know too much about me."

"Not too much—enough. We have to. And that is about all I can tell you at the moment. You will learn other details of our operations as you go along. Eventually, you will meet Mr. Jorgasnovara, Engineer of the entire project, but it may be months. He's an elusive man."

"Dr. Adams will introduce you to the surroundings and your fellow engineers and give you directions in beginning the training which will be necessary. I need not remind you, of course, that your being in charge of interocitor assembly is only a first step in your progress here but it is an important step."

Warner rose and extended a hand. "It's been a great pleasure to know you. I'll be constantly available for any questions or problems that arise."

"Thank you, Dr. Warner."

## CHAPTER II

### *"Peace" Engineers*

IT was almost a letdown—the contrast between his strange introduction to the Engineers via the interocitor and this seemingly prosaic industrial plant here in the desert. Nothing out of the ordinary seemed to be going on here—nothing, that is, except the manufacture of the interocitor. And a girl whose eyes were haunted with a fear she could not always hide.

She spent the remainder of the morning with him. He learned that her psychiatric work in the employment depart-

ment was highly essential in testing, judging and training the peculiarly unique individuals required for work in the plant. They went on a tour of the plant. Two of the buildings, he found, were devoted entirely to development engineering. Over five hundred engineers were employed in scores of projects.

Everything that a researcher could desire was at their disposal. The prodigality of equipment almost made him sick when he thought of the penny-pinching controls imposed at Ryberg, where he'd had to fight tooth and nail for every hundred dollars a project cost.

This was an engineer's paradise!

Ruth Adams sensed what was in his mind as he looked over the beautifully equipped laboratories. "You'll enjoy working here, I know. There is nothing lacking in the way of equipment. Anything these men want is theirs for the whistling."

"But it costs heavy money for equipment like this!"

"The company is quite profitable. The Engineer and other heads are not just visionaries. They have adequate financial sense to make all this possible."

She introduced him to numerous of the engineers and section directors. He was not surprised to find a number of professional acquaintances and personal friends among them.

Among them was Ole Swenberg, a big blond fellow he had known very well at college. He had often wondered what had happened to Ole. They had not met since the war.

Ole beamed and ran across the lab to grasp Cal's hand when he recognized him.

"By golly, Cal, I thought it was about time you were showing up here. The way you used to talk when we were in school I expected to find you running the place."

"I hid out. What are you doing here, you big Swede?"

"Any darned thing I please and that's the truth. I don't have to worry about publishing a paper every three weeks in some stinking journal—for the prestige of the department—either. I stayed on at college and taught four years before I got fed up. What are you geared up for?"

"They tell me I'm going to direct the interocitor assembly for a while."

"Boy, have *you* got yourself a job! That's hot stuff. They tried to farm it out and no plant in the country could handle it. That's why you've got it. But it's lunch time. Come on. It's on me."

They followed the garrulous Ole to the plant cafeteria, and listened to the account of how he was revolutionizing the world of science with his discoveries—with the small help of the group of Peace Engineers as a whole. But lunchtime was not long enough for him to finish.

"Tell you what," he said, as they finished. "How about a small beer bust in your diggings tonight? You haven't told me a thing about what you've been doing. Ruth and I'll come over and give you the real lowdown on what you're in for. That okay with you, Ruth?"

She smiled tolerantly towards Cal. "The Swede seems to have it all arranged."

"Well, that's fine. Only I don't have any diggings exactly," said Cal. "What do I do in that case?"

"Oh, you have one of the company houses available if you want it unless you prefer something in town. But it's more convenient out here," said Ruth.

"Suits me."

Cal spent the afternoon unpacking and getting settled in his new quarters. He had two comfortable rooms and a kitchenette in case he wanted to do any cooking but he expected to take his meals at the cafeteria.

Finished with stowing his gear he sank down on the sofa and looked out the window towards the strange plant where unheard-of technology produced gadgets called interocitors.

It was a weird set-up in some ways but for the first time in his life he felt completely at ease in his place of work. In the industrial plants he'd known, engineers were constantly shifting from one place to another, moving around, looking for offers, eternally trying to "get somewhere."

None of them could ever define that mystic goal but they knew the same common sense of deep frustration. They battled each other, trying to make their company's product cheaper, trying to make their electric razor or toaster or radio a bit better than their fellow engineers who worked for other concerns. But, like paid gladiators, they felt no loyalty except that which was inspired by their paychecks.

He had run in that professional rat race for many years. After college he worked for Acme Electric, then he found a better offer at Midwest. Corning had offered a little more money. He had found better working conditions at Colonial. Then Ryberg had seemed to be a better research setup—

It would have gone on the rest of his life. He'd have landed a department directorship somewhere. Then maybe he'd have married. And that would have been the blind alley out of which he could not return. After fifty years they would have given him a gold watch.

It was over. The Engineers were no gold watch outfit. It was too good to be true—too good to last.

**O**LE and Ruth knocked on his door at eight. Ole had a half dozen brown bottles in his hand and Ruth had a basket of sandwiches.

"We knew you'd be hungry," she said. "You don't look like the cooking type of bachelor."

"Believe me, I'm not."

"See what I told you," said Ole loudly to Ruth. "This is a chance you can't afford to miss."

"Oh, for heaven's sake, Ole!"

Cal smiled and looked from one to the other. He wondered how a serene person like Ruth Adams happened to be going around with the loud-mouthed Ole.

The sat down and Ole became suddenly serious. "We didn't come for just a social call, Cal."

"What then? I thought you liked my company. Is this place business twenty-four hours a day?"

"Our kind of business is. What kind of an aptitude test did they give you?"

"The interocitor. They teased me into building one from a catalogue."

"Know what mine was? A book that made a page-at-a-glance reader out of me. I ordered some new texts from a company and these things came. I looked at a page—and it stuck. Nothing on it ever left me. Couldn't get rid of it if I wanted to. The most intricate circuit diagrams you can imagine. One glance and they're mine. Pretty neat, eh?"

"Sounds wonderful. I'd like to see some."

"You will. They're used in parts of the training you'll get. You'll get a brainful of stuff you never dreamed was in heaven or earth."

"When I first got those books I tore them apart molecule by molecule to find out what made them tick. I never did find out but I became a biologist, and biochemist as well as an electronics engineer in the process. The Engineers liked my attack, even if it was a failure, so they took me on."

"Do they have a different test for everyone?"

"No. You're the first one, however, that I've known who got the interocitor. That's been top hush-hush stuff. They needed you pretty badly."

"I'd like to know more about how these Peace Engineers operate. I suppose I'll get the dope in time as Warner says but I wish you could tell me a little more."

Ole looked bleak. "Cal, do you believe that guff?"

"What do you mean, guff?"

"About the Peace Engineers. All this phony window dressing."

**C**AL sat up straight on the edge of his seat. He felt as if someone had dealt him a blow underneath his ribs. "What are you talking about? You mean this thing isn't on the level?"

"Ole—" Ruth interrupted. "Let me talk."

"Sure. You can make it sound more reasonable."

"When I first came here," she said, "I was appalled at the naïveté of the scientists and engineers who make the wonderful machines of which our civilization boasts."

"Peace Engineers! They knew that half the scientists of the country were sick at heart after the last war because of what had happened through the discoveries of science. It was the most obvious bait they could hold out. And the best brains in the nation bit on it."

"Who are 'they'?"

"That's what we don't know. Ole and I and a dozen or so others of the engineers have become—to put it mildly—suspicious of the whole set-up. And our suspicions have frightened us."

"There is absolutely no organization, no society or fraternal group called 'Peace Engineers' as you might expect. There is nothing but this plant and a group of engineers who work here just as in any other industrial plant—that and the incredible technology that someone possesses. After all the talk about



Peace Engineers there is still nothing but—a vacuum.

"Technology in a vacuum. An incredibly advanced technology. You know more about it than either of us do. Under what kind of circumstances would it be produced?"

"Time and money—great quantities of both would be required. But I supposed they had both."

"Ruth has missed an important point," said Ole. "It's more than technology. There's new basic science involved. Science that speaks of a culture almost wholly foreign to anything we know about."

"I'm inclined to agree with that," said Cal thoughtfully. "But does that prohibit the Peace Engineers from originating it and if so where did it come from?"

"That's what scares us. Look at what's happening—the cream of the scientific brains of the nation are working for the Engineers. Suppose they aren't so peaceful in spite of their name? Suppose that it is really an enormous camouflage for war preparation? Suppose they are giving us minor secrets in return for the privilege of milking our scientific genius for all they can."

"There are two things wrong with those arguments. You just got through pointing out that these things are not exactly minor. In comparison we aren't contributing very much in return for what we get."

"Don't kid yourself. Our best brains being applied to this advanced basic science are producing plenty. And suppose that what we have seen is relatively minor compared with what we haven't seen?"

Cal leaned back heavily. "I can't speak from experience yet but I still think you're on the wrong track. An enemy could hardly operate like this under the nose of our own military."

"Who said anything about enemy?" said Ole. "Isn't it just as bad in the long run if our own military has corralled these brains by this deception? In fact, that seems to be the more likely explanation."

"We're not arguing for any one conclusion," said Ruth abruptly. "We don't know. We're simply saying that this whole front of Peace Engineer propaganda is false. We want to know what's in back of it. It scares us to think what implications might lie behind this se-

cretely controlled technology.

"But we can't do anything at all about it. We can't go to any authorities and tell them we're scared and ask them to investigate the place. There is absolutely nothing we can do unless we find out who is behind the Peace Engineers."

"That's where we need your help," said Ole. "You're going to be in a high and responsible place around here. If anyone is in a position to get behind this false front you ought to be able to. Will you help us find out what is going on here?"

"No," said Cal. "The one thing I've looked for all my life is here. I'm willing to grant whoever originated this technology some rights to secrecy regarding the dispersal of it. I'm going to play ball with them until I find out differently and it will take a lot more than these suspicions of yours to change my mind."

"You don't have to get sore," said Ole. "*Just try to find out.* You'll get curious sooner or later. Then you'll beat your head against the stone wall just like the rest of us are beginning to do. And then maybe you'll begin to get scared, too, when you realize that no one here knows a thing about whose hand is behind all this."

HE wasn't sore, Cal thought, as he lay in the darkness vainly trying to sleep long after their departure. He wasn't sore but he was more than irritated by their jumping him with their suspicions on his first night here.

Certainly, in every organization there were soreheads who didn't like the way things went. He would never have suspected Ole or Ruth of being such, however. But he could scarcely be more generous after what he had heard from them.

And yet—that wasn't the whole story and he knew it. The fear he had seen in those dark eyes of Ruth was a real and tangible thing to her. It was no mere fantasy.

He would wait. In one respect they might be right. In his position as engineer in charge of interocitor assembly he might have wide opportunity to study the organization as a whole. When he found the answers to their questions he could put their minds at ease. He was certain the answers would not be what they suspected.

## CHAPTER III

*Jorgasnovara*

FOR the next six months his days and nights were spent in the most intensive study that he had ever done in his life. The engineering specifications and basic physical principles behind the interocitor were thrown open to him. He pored over the books—but he was never shown any such as Ole had described. He built up components, tore them down again—until he was certain he could build an interocitor blindfolded and with one hand tied behind his back.

In all that time he did not once meet the Engineer, Jorgasnovara, although the man was pointed out to him. Warner had promised that he would be introduced and Cal wondered when the time would come.

It was a wonderful day when he at last saw the assembly lines in full operation and tested the first completed equipment as it came off the line. He had gained skill in executive leadership and he had a smoothly running plant that required only top direction of the most general kind.

It gave him a breathing spell, a measure of freedom to contemplate the significance of what he had accomplished, freedom to review his position, freedom to question—

During those busy months he had found little time to talk to Ruth. At first she'd been his guide in getting him acquainted at the plant, but gradually his entire time had been taken up with other engineers. It had been five weeks, he thought suddenly, since he had even seen her.

He reached for the phone and called her extension.

Her voice was a pleasurable sound in his ear. "Ruth! I thought you would be over for the christening. The lines are moving."

"Hello, Cal. No, I heard about it but I was too busy to get over. Dr. Warner is very pleased with your success and the Engineer thinks highly of your work. In fact, I was to call you and let you know that he's coming in and wants to talk with you, probably tomorrow."

"Well, how about a little delayed celebration?"

"Such as what?"

"Oh, nothing fancy. A dinner in town, maybe. Then just go for a ride."

For a moment there was no sound from the receiver, then she said hesitantly, "All right, Cal. I'd love to. Pick me up at my place. I live in town, you know."

As he scribbled her address after hanging up he reflected that he hadn't known. He hadn't learned a thing about her in all the time he'd been here. He didn't know where Ole fitted in but that didn't worry him much. Ole was a good guy but he wasn't for Ruth.

And Cal found himself wondering again about those fears of Ruth. He had found absolutely nothing yet to substantiate them yet he couldn't forget her eyes the way they had looked that first day.

He picked her up at eight. She was dressed in a soft gray evening dress and wore the tiny orchid he had sent. It was utterly impossible to think of an M.D. and Ph.D. in that dress. He didn't try.

There was no hint of distress in her. She was pleasant and gay at dinner and not once did the talk go back to their work at the plant or her feelings about the place.

Afterward he headed the car beyond the outskirts of town. They stopped with the radio on to watch the moonwashed desert.

But her mood seemed to have changed once they left the lights of the restaurant. She settled in silence in the far corner of the seat. A panicky thought occurred to him that he might have offended by stopping. He moved to start the car again.

"Oh, don't, Cal—let's watch it for a while."

"I thought—" he fumbled.

"I got a letter from Ole today," said Ruth abruptly.

"Why a letter? Where is he? I haven't seen him for a couple of months but I thought he was still around the plant."

"No, he's gone." She was looking straight ahead, her voice ending each flat statement with finality as if not willing to volunteer more.

"Why? Where did he go? Was it—what you tried to tell me about—that night six months ago?"

She nodded slowly. "Ole found out. I wanted you to see him and talk to him. Maybe you could have understood what

he was trying to say. I made an attempt to call you but you weren't there. And then they came for Ole and took him away. They wouldn't let me see him again—until they had changed him."

"Changed him? What are you talking about, Ruth? Did they do something to Ole?"

SHE turned slightly towards him so that he could see the moonlight full on her face. It lent a ghostly radiance and heightened the returning fear in her eyes.

"He broke down with hysteria in his lab one day," she said slowly. "Some of his assistants brought him in to me. He kept babbling about some fearful thing he'd seen in the sky but I couldn't understand it. And then for just a moment he grew more coherent and said that he'd been working on some interocitor modifications and suddenly he'd heard the Engineer thinking."

"Thinking!"

"That's the word he used. He was in such a state of violent terror that I should have given him a quieting hypo immediately but that was when I tried to get you. I thought maybe you would understand. And then they came and took him away."

"Who?"

"Warner and a couple of his medical assistants. They said they would be able to take care of him but they wouldn't let me come along. Afraid he'd get too violent, they said."

"What happened?"

"Nothing. I saw Ole the next day. He acted as if very little had occurred. He refused to talk in detail about what had happened and told me he was leaving. That was all he would say."

"Why didn't you tell me this before?"

"I don't know. I thought perhaps I could get more out of Ole later so that I would have proof for you—but I couldn't. I guess I shouldn't have told you tonight except that now that Ole's gone I can't talk to anyone about what I think. The others seem to be too absorbed in their wonderful laboratory privileges to criticize. They're closing their eyes to the suspicions they had."

She turned suddenly and looked into his eyes. "Cal, won't you go and see Ole and try to find out what he learned?"

Cal remained silent. What could they have done to Ole, he wondered. Did they

have a method of taking care of disgruntled employees to keep them from talking? Some method that was on a par with the rest of this advanced technology? That would explain how their secret could be so well kept without benefit of military suppression.

"I think I'd like to see Ole," he said. "I wish you had told me this before. Isn't it possible they just sent him away to keep him from disturbing the morale of others with his suspicions?"

"I don't doubt that they did! But that doesn't explain what happened to Ole to make him so deathly frightened."

"Maybe they arranged that, too."

"I could believe that. But what about the interocitor? I don't know anything about the physical science involved in it—but can you honestly say you know *everything* about the device? Ole didn't think so and it was when he was experimenting on it that he had his fit of hysteria."

"Look—nobody can say he knows *everything* about even an ordinary radio set."

"You know what I mean. A radio has a known function and will perform that function when it is properly operating. But are you absolutely certain you know all the proper functions of an interocitor?"

"Well—yeah, sure—hang it all, Ruth, the jigger is so infernally complicated that even while I think I know all about it I still can't say that it might not be capable of something I don't know about. But why should I suspect it?"

"Because the Peace Engineers setup is a phony."

"That brings us around in complete circle."

"You forget what happened to Ole when he tried to investigate one. If I'm right—and you don't believe me—I'm putting my life in your hands by telling you this. I'm sure of that."

He reached out and drew her into the curve of his arm. He could feel again the tension of her body as he had that first day they met.

"Ruth, you're exaggerating! I'm not saying I won't believe you. Perhaps you are right—engineers are simple-minded folk who can be fooled by almost any kind of make-believe. Armies would still fight with swords and slings if it weren't so."

"On the other hand, because this place



is so close to the engineering paradise I've always dreamed about I don't want to get kicked out for going around asking the top guys if they've signed loyalty pledges or ever belonged to the Comrades."

"You're laughing at me," she said bitterly.

"I'm not. I promise you I'll do everything I can to find out if you and Ole are right. He was my friend. You shouldn't have kept me from knowing what had happened to him."

"I'm sorry. I didn't think you'd care much, really."

"I'll keep my mouth shut around the plant but I'll let you know everything I find out."

"Tomorrow you'll see the Engineer," she said prophetically. "Then you'll know."

**H**E had once glimpsed the Engineer from a distance as the plant director climbed into his personal plane on the landing field. From that one glimpse he knew the man was *big*.

Beyond mere physical size, however, there was a *sense* of bigness. This was the first impression that Cal Meacham felt when he stood before the Engineer's desk.

"Sit down." He motioned to Cal.

"I'm Mr. Jorgasnovara," said the man, smiling slowly. "I suppose you can see at once why I'm simply referred to as 'The Engineer.' I rather like the title myself—a vanity, no doubt, but engineering has always seemed about the most important thing in the world to me."

"I can understand that," said Cal. He had almost forgotten Ruth's fears and found himself liking the man. Jorgasnovara appeared to be about sixty. His head was completely bald with scarcely a speck of fuzz to suggest it had ever grown any hair. It was large, a high domed cranium, with deep eyes. His cheek bones were wide, sloping just a little to a square jaw.

"I hope you don't think my actions eccentric in that I haven't asked to meet you until now," he said. "I have been very well satisfied with your progress and have been content to let you proceed at your own pace while I attended to other details of our plants that were not going so smoothly."

"Thanks," said Cal. "The technology

is still pretty far ahead of me but I feel I'm creeping up on it. It still seems rather incredible that such advances as I see can be accounted for by the time you've had available."

The Engineer glanced up sharply from the paperweight on his desk. "How much time do you suppose it has taken?"

"Why, I gathered that you'd just come into existence as an organization since the last war."

He shook his head. "This has been a long time in the making—a long time. The technology you see is largely the work of men long dead. Would it surprise you to know that the history of this society goes back to the seventeenth century?"

"That far!"

"A Frenchman—one Jules de Rande—was the first, as far as we know, to conceive the idea. He published his philosophy for the benefit of a few friends in which he proposed that men of talent determine the use to be made of their genius.

"All about him he saw men given patronage, being bought for their intellects and used like articles of war or commerce. He had the brilliance to glimpse the distant future of our own day in which men of science could be bought like ancient mercenaries.

"De Rande succeeded in persuading many of the learned men of his day to hold back. When he died his philosophy remained in the minds of a few. Sometimes it all but disappeared, then revived in relatively large groups. But always there was a growing mass of scientific knowledge being withheld from the world in the archives of this group.

"Then, seventy-five years ago, during the Civil War, the Peace Engineers were organized as a definite society. Their work has been continuous and growing since that time."

"It's almost unbelievable," said Cal. "To think that such a society could exist underground all those years! Were they always ahead of the rest of civilization?"

The Engineer nodded. "Tungsten lamps were available fifteen years before poor Tom Edison began his first carbon filaments. We knew the principles of high-tension power transmission and could have built electric generators as good as any today."

"But withholding all that technology from civilization—"

"Kept the atomic bomb from being used in the First World War instead of the Second. If it had not been so the Second would perhaps have been the last and you and I would even now be cowering in caves, snarling over a piece of rotten meat—provided we were alive at all. It was worth it."

Cal sat back weakly in his chair. This momentous revelation was almost too much to absorb at once. Slowly he began to perceive the vast panorama of hidden dreams that lay behind the Peace Engineers—

How wrong Ruth and Ole had been in their suspicions!

"What about those who come into the organization and leave? How has the secret been kept? I am thinking of my old friend, Ole Swenberg?"

"Ole never knew what I have just told you. Neither do any of the others who leave—and there are many who do. They say little about us because they have little to say. Most of them do not even know as much as you did when they first come here.

"We hire them simply as engineers and advance them as their understanding and personalities develop. I may tell you that there is much yet that I have not revealed—but I have no fear in telling you as much as I have. You will not leave us."

The certainty in the Engineer's voice sent an odd chill through Cal but he could see nothing ominous in the man's face.

"How can you be so sure of that?"

The Engineer's smile was enigmatic and almost terrifyingly sure. "We are quite certain. We know you very well, Mr. Meacham."

The big man seemed to become lost in thought for a moment. The massive lines of his face seemed to slowly shift and form an immobile cast of bleak severity and unknown depth. Cal felt a slow chill of awe as if he were in the presence of an intellect that had seen the vast stretch of eons of time and light years of space.

Abruptly the man shifted and rose. He extended a massive hand to Cal. "It's been a pleasure talking with you. There is little more that I have for you at this time. Your work is excellent. I shall see you again from time to time and shortly I think we shall have a new assignment for you."

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## CHAPTER IV

### *Market Beyond the Stars*

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CAL returned to his own personal laboratory that opened from the executive offices of the interocitor plant. He closed the door and perched on a high lab stool and stared out the windows overlooking the plant buildings.

His feelings churned with doubt and questions he knew not whom to ask. Jorgasnovara's revelation opened up unlimited numbers of new channels of speculation. He had no doubt of the truth of the story. What troubled him was the implication behind the admittedly untold portion of the tale.

The factor that seemed most obviously missing to him was a sense of fraternalism, of organization, a missionary-like zeal to obtain their goal. Perhaps in three hundred years such attitudes of the zealot would normally have been replaced with more practical considerations.

But everything he had heard still left unexplained the resignation of Ole Swenberg. As he thought back Cal had to admit that the Engineer had sidestepped quite completely the direct question of just what had happened to Ole. He couldn't help feeling that it had been deliberate.

At the heart of it all lay the mysterious apparatus, the interocitor. What had Ole learned from it? What had he meant by saying he heard the Engineer thinking? Or had Ruth merely misunderstood him in his incoherence?

Cal moved slowly from the stool to the opposite side of the room, where one of the machines stood. He knew how it was built. He understood the gross electrical characteristics of all its components. He knew that it depended upon a mode of transmission that was not electromagnetic radiation.

It was here that his knowledge broke down. In the intensity of his study to learn how the thing could be produced on an assembly line he had not had the time to burrow into the depths of the mathematical theory on which it was based. That too was something wholly beyond conventional technology. An entire new mathematical system had to be absorbed in learning that theory.

Perhaps Ruth was right. He still didn't know *all* the functions of the interocitor.

A sudden knock on the door roused him.

He opened it, admitting Ruth. "You saw him?" she said.

"We had quite a little chat."

"What do you think?"

"That's a hard question to answer. It has to have so many qualifications. I'll admit he is a strange egg but he's on the level. As far as he's gone he's not attempting to deceive anyone. I'm sure of that."

"So he won you over that easily?"

"Wait a minute. I said there were qualifications. The bug factor lies in what he admits he isn't telling but I honestly can't see any reason for getting the meemies over it."

"Ole did."

"I know. That's what I've been thinking about. I can't understand what he meant when—and if—he said he heard the Engineer thinking—"

"Perhaps he meant just what he said."

"That this thing can pick up thought waves?" Cal rubbed his chin in the cup of his hand. "I should have learned better than to say a thing is impossible around here but I don't see how. And if so, you'd think Jorgasnovara would protect himself against it."

"Maybe he doesn't know it."

"I'd hate to bet on that. I'm afraid there isn't much that he doesn't know about what goes on around here."

"Well, I hope you find out. I—came in to say goodbye, Cal. I'm leaving too. I can't take it any longer and I don't want to wait until I get the treatment they gave Ole."

"Leaving! No—wait, Ruth. That's not necessary."

"I suppose a psychiatrist should know enough about his own emotions to be able to keep from giving way to the meemies but I just can't any longer. The place is oppressive. I can feel it in the air."

"There's something going on that we don't know anything about. Whatever it is, Ole found out, and it nearly scared him out of his mind. I'd hoped that maybe you could find out but I'm afraid you've been taken in just like the rest."

"Look, Ruth—give me a week or a month or whatever it takes. I want to

know what happened to Ole just as badly as you do. I promise you that if this interocitor can do any tricks I don't know about I'll find it out."

She hesitated, her brown eyes looking into his gray. "All right," she agreed. "I'll wait. There's one more thing I'd like to know. Do you know what is happening to the interocitors that you are making, where they are being sold?"

He laughed. "I've been so doggone busy getting the things off the production line that I haven't worried much about that. I leave it up to the sales and shipping department to get rid of them."

"I went through the shipping department yesterday," she said. "There were six hundred units crated for shipment. They were gone this morning."

"That's our normal production."

"How did they go out?"

"Truck. They tell me the lines generally pick them up after dark on night runs."

"Isn't that a bit unusual?"

"I hadn't thought much about it. What difference does it make anyway?"

"It rained last night. There might be tracks out there even in the asphalt," she said. She turned abruptly and walked to the door, then turned. "How about coming over to my place for dinner tonight? I'm not such a bad cook."

**S**HE disturbed him in more ways than one—and that was all right, he thought. If only they could get this business of her suspicions regarding the Peace Engineers straightened out.

Her remark about the shipping department annoyed him too. He *had* wondered about the distribution of the interocitors but had been too busy to do much inquiring about the sale of them. Certainly a good many of them were being turned out and he didn't have the faintest idea where they went.

He glanced at the interocitor and at the clock. Lunch time—he should have asked Ruth to go with him. Maybe he'd meet her in the cafeteria.

On the way his curiosity won out. He detoured to the shipping room and dock. Outside the big doors the warmth of the sun was drying the freshly wet landscape. He looked around. He couldn't see any tracks and didn't expect to. The loading area was newly constructed and the asphalt firm.

There was one bad spot, however, that



drew his notice. Thirty feet out from the dock a pool of water had collected in a saucerlike depression about twenty feet wide. Have to get that leveled up, he thought.

He didn't see Ruth at lunch and hurried through the meal to get back to the lab. Once there he settled down again before the interocitor and began work. He got out all the books they had given him on the math behind the machine.

He scarcely moved through the remaining hours of the day as he pored over them. He had to admit that Ruth's fear was slowly convincing him there was something he didn't know about the interocitor—and should.

At nine-thirty that night the phone rang. Even as he picked it up, glancing at the clock, a wave of regret passed over him.

It was Ruth's voice that spoke to him. "Dinner—remember? It's getting pretty cold."

"Ruth! I've been working here ever since you left. I forgot all about it."

"That's a nice compliment. The first time I invite you to dinner you forget it."

"Ruth, I'm awfully sorry!"

"Well, I guessed that's what had happened, so I've packed everything up in an electric warmer. If you're going to be there a while longer I'll bring it over."

"If you're not careful I'm going to be calling you 'darling.'"

"Try it and see what happens."

She hung up before he did.

He returned to his work, but absently. Whatever came of this job it was worth it just to have found her. There was certainly not another like her left in the world.

It seemed only minutes until he heard her at the door. She bowed formally as he opened it for her. "Your dinner is served, sir."

"Golly, Ruth, I don't know what made me forget. I feel like a heel."

"According to the teachings of psychiatry," she said as she began spreading out the dinner, "people forget only what they want to forget."

"I can see I've got some rough years ahead of me with a psychiatrist around."

She turned to look at him with arched eyebrows. "Are you thinking seriously of having one around?"

"Mighty seriously, darling—mighty seriously."

After they had eaten she cleaned up the things and moved towards the door. "At least I hope you'll take me home now."

He ran his fingers through his hair and looked back at the machine in its panels by the wall. "There's just one more thing I want to get through my head. It won't take a minute."

She slumped in a chair and put her elbow on the laboratory bench. "So this is the way it's going to be."

He grinned at her.

**F**OR an hour or more he studied the texts on the table in complete silence. Slowly there began to appear a consecutive thread of knowledge that was fundamental in the field employed for communication in the machine. Yet, as it was now built, this basic characteristic seemed to be blanked.

As he nailed down the final factors of it clearly in his mind he straightened up to look at the enigmatic black panels with their shiny indicators and controls. Was this the thing that Ole had stumbled across? He thought of Ruth's description of the boisterous Ole crying hysterically of some vast frightening menace he had seen in the sky, of the thoughts he had heard the Engineer *think*—

If this were it, then perhaps there was something after all in the dread that haunted Ruth and Ole.

Hastily he went over to the interocitor and began removing panels. He reached inside, disconnected a bank of cathermine tubes and reran their input leads. He cut out the visual circuits completely and modified the field strengths in the coils that governed the albion index of the circuits. After half an hour he was finished.

He hesitated a moment before he turned the power into the modified circuits. He glanced at Ruth. Her head was down on the table, her dark hair spilling outward like the leaves of some velvet flower. She was sound asleep. Cal smiled tenderly. Everything was going to be all right.

He threw the switch that energized the altered interocitor. He had no clear conception of what he was looking for but he knew that the fundamental unblanked field described in the texts should now be emanating from the machine.

It was hardly perceptible at first, like a haunting memory. It was neither sound nor sight. The only word that leaped to his mind was—*thought*.

He looked about in sudden concern for Ruth. She had raised her head as if suddenly roused from troubled sleep. He couldn't tell whether she perceived it too.

He shut his eyes momentarily and attempted to blot out the remnant of physical sound that filtered through the quiet night. Faintly an image was forming in his mind as if he were imagining a picture under his own initiative. But he knew he wasn't thinking it. It was coming from—*outside*.

The image of Jorgasnovara was in his mind and he was speaking—no, thinking, for there were no movements of his lips. His lined chiseled face was cast in planes of utter weariness and discontent. His thoughts seemed addressed to someone.

"... report we are doing the best possible under the circumstances. Production of plant C is six hundred units. D is about ready. We have four hundred on hand that you can pick up here tonight. If Soccorian outpost goes can we maintain here?"

There was a moment of silence, in which an answer seemed to be coming to the Engineer from some source, but Cal could not get that.

"All right," the Engineer said at last. "Near the outer ring? Give me five minutes."

The thought of Jorgasnovara receded and vanished from Cal's mind. He turned away from the machine.

"That must have been the way it was with Ole," said Ruth in a hushed voice.

"What he heard must have been different, however," said Cal. "This was nothing fearful to drive a man out of his mind."

"But Jorgasnovara knows things that would. Didn't you feel it—the sense that he knows and has been aware of things of utter terror and frightfulness that a normal mind could scarcely endure?"

Cal nodded slowly. He had felt the same.

"Ole must have heard some of those things," said Ruth. "Do you understand what it's all about?"

"No." Cal shook his head. "I don't understand a thing. The interocitor is even more of a mystery than I thought.

It is capable evidently of making direct mental contact, yet it is overbuilt with a lot of crude visual and audio circuits.

"Tomorrow we'll go to see Ole. If there's anything sinister that he found we'll get it out of him. I knew him pretty well—he may talk to me. If not, perhaps you can persuade him to submit to pentathol treatment. We'll do what we can.

"Until we know for sure I still won't let go of my paradise. You can't realize what it means to someone who's always wanted to do real engineering and has been bogged down in toaster and electric-razor plants all his life. This technology—it's like breathing pure oxygen."

"And just as likely to make you drunk."

"Perhaps."

"Let's get down to the shipping department," she said. "He said only five minutes."

THEY had to pass through the section where the long assembly lines were dark and still and then they came near the shipping department. They heard the sounds together—the rumbling of the great doors that opened to the outside. There were movement and a light inside the shipping room.

"Down here," whispered Ruth.

Reluctantly Cal crouched behind a foreman's desk with her. He felt a little ridiculous—spying on his own shipping department.

Then Ruth shook his arm fiercely and her voice was almost a tiny scream. "Look at it—out there by the platform—Cal, what is it?"

He saw it then. It had been there all the time but in the darkness it was difficult to distinguish.

A vast ellipsoid that towered above the door, as if it were as tall as the three-story plant. Dim lights were visible in the interior of the thing through the port that was open opposite the platform. A gangplank extended between the two.

Cal thought then of the depression he'd seen that noon after the rain. "So that was the tracks you tried to tell me about!" he said.

Ruth nodded, trembling, in the darkness. "I knew that depression hadn't been there long and I wondered if—something—had been pulled up to the door to take away the interocitors. But I

didn't dream of anything like this! What is it?"

"I wish I knew." But slowly, there was growing the unbelievable conviction that he *did* know. His mind held it back as long as possible.

The Engineer came into view as they watched. A small instrument like a flashlight was in his hands. With it he was towing a chain of heavy interocitor crates, each of which weighed over nine hundred pounds. They were linked together somehow and followed the tiny beam like obedient dogs.

He disappeared into the depths of the mysterious freighter. The stream of boxes followed for minutes until the last one disappeared into the portal. After moments, the Engineer appeared again.

"Come on!" Cal whispered. "The roof!"

He tugged roughly at Ruth's sleeve. Obediently, she followed, slipping through the darkness, stumbling once or twice on the iron stairway leading to the roof. And then they were outside.

The top of the ellipsoid was still ten feet above the edge of the roof. As they peered over, they heard the sharp clank of the closing doors below.

"We'd better stand back," said Cal. "No telling what—"

The massive object grew suddenly misty. Like a faint, transparent film it seemed suspended fragily in the air. Then abruptly it was gone.

But Cal had seen its going. It had moved straight up at incredible velocity. For a moment Ruth raised her eyes to follow his gaze out into the distant star field, where a fleeting shadow passed across the milky way.

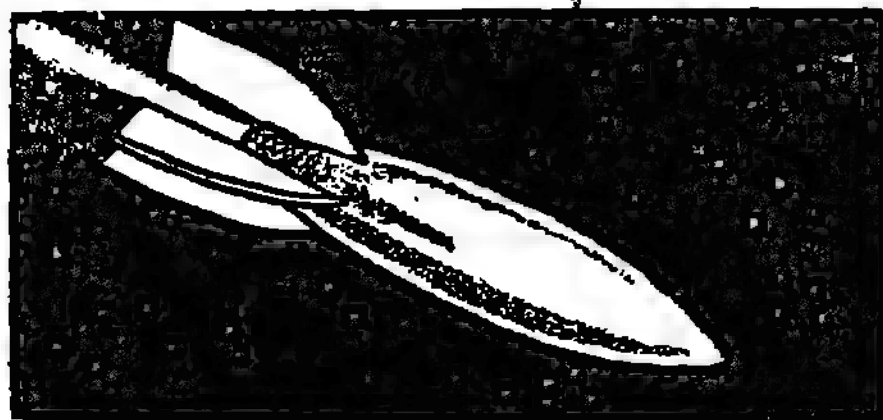
Then she buried her face in his shoulder. "Cal, I'm afraid! What does this mean?"

He made no answer. It was not a thing of terror. A choking sense of awe made it impossible for him to speak. He had witnessed the miracle that he had never dreamed of seeing in his lifetime—and he was part of it! He would know all of it, and make it his.

The Engineers had conquered space.

He understood now the vast secrecy that shrouded their doings, why they held back a knowledge of their motives, their markets, their ultimate ideals.

For how could they tell the fledgling engineers that the interocitors were produced for a market beyond the stars?



Cal Meacham and his aides battle to end warfare forever, and finally learn the strange truth about their Phoenix plant in the next adventure of the Peace Engineers—

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# THE LONELY PLANET

a novelet by MURRAY LEINSTER



## CHAPTER I

### *Protean Plant*

**A**LYX was very lonely before men came to it. It did not know that it was lonely, to be sure. Perhaps it did not know anything, for it had no need for knowledge. It had need only for memory, and all its memories were simple. Warmth and coolness; sunshine and dark; rain and dryness. Nothing

else, even though Alyx was incredibly old. It was the first thing upon its planet which had possessed consciousness.

In the beginning there were probably other living things. Possibly there were quintillions of animalcules, rotifera, bacteria and amoebae in the steaming

# THE LONELY PLANET

a novelet by MURRAY LEINSTER



## CHAPTER I

### *Protean Plant*

**A**LYX was very lonely before men came to it. It did not know that it was lonely, to be sure. Perhaps it did not know anything, for it had no need for knowledge. It had need only for memory, and all its memories were simple. Warmth and coolness; sunshine and dark; rain and dryness. Nothing

else, even though Alyx was incredibly old. It was the first thing upon its planet which had possessed consciousness.

In the beginning there were probably other living things. Possibly there were quintillions of animalcules, rotifera, bacteria and amoebae in the steaming



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*Revolving, sentient and unique, the creature-planet Alyx learns about men—and with catastrophic results, tries to serve them!*

pool in which Alyx began. Maybe Alyx was merely one of similar creatures, as multitudinous as the stars and smaller than motes, which swam and lived and died in noisesome slime beneath a cloud-hung, dripping sky. But that was a long time ago. Millions of years ago. Hundreds of millions of years now gone.

When men came, they thought at first the planet was dead. Alyx was the name they gave to the globe which circled about its lonely sun. One day a Space Patrol survey-ship winked into being from overdrive some millions of miles from the sun. It hung there, making conscientious determinations of



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the spectrum, magnetic field, spot-activity and other solar data.

Matter-of-factly, the ship then swam through emptiness to the lonely planet. There were clouds over its surface, and there were icecaps. The surface was irregular, betokening mountains, but there were no seas. The observers in the survey-ship were in the act of making note that it was a desert, without vegetation, when the analyzers reported protoplasm on the surface. So the survey-ship approached.

Alyx the creature was discovered when the ship descended on landing jets toward the surface. As the jets touched ground, tumult arose. There were clouds of steam, convulsive heavings of what seemed to be brown earth. A great gap of writhing agony appeared below the ship. Horrible, rippling movements spread over the surface and seemed alive, as far as the eye could reach.

The survey-ship shot upward. It touched solidity at the edge of the northern icecap. It remained a month, examining the planet—or rather, examining Alyx, which covered all the planet's surface save at the poles.

**T**HE report stated that the planet was covered by a single creature, which was definitely one creature and definitely alive. The ordinary distinction between animal and vegetable life did not apply to Alyx. It was cellular, to be sure, and therefore presumably could divide, but it had not been observed to do so. Its parts were not independent members of a colony, like coral polyps. They constituted one creature, which was at once utterly simple and infinitely diverse.

It broke down the rocks of its planet, like microorganisms, and made use of their mineral content for food, like plankton. It made use of light for photosynthesis to create complex compounds, like plants. It was capable of amoeboid movement, like a low order of animal life. And it had consciousness. It responded to stimuli—such as the searing of its surface—with anguished heavings and withdrawals from the pain.

For the rest—The observers on the survey-ship were inclined to gibber incoherently. Then a junior lieutenant named Jon Haslip made a diffident

suggestion. It was only a guess, but they proved he was right.

The creature which was Alyx had consciousness of a type never before encountered. It responded not only to physical stimuli but to thoughts. It did whatever one imagined it doing. If one imagined it turning green for more efficient absorption of sunlight, it turned green. There were tiny pigment-granules in its cells to account for the phenomenon. If one imagined it turning red, it turned red. And if one imagined it extending a pseudopod, cautiously, to examine an observation-instrument placed at its border on the ice-cap, it projected a pseudopod, cautiously, to examine that instrument.

Haslip never got any real credit for his suggestion. It was mentioned once, in a footnote of a volume called the *Report of the Halycon Expedition to Alyx*, Vol. IV, Chap., 4, p. 97. Then it was forgotten. But a biologist named Katistan acquired some fame in scientific circles for his exposition of the origin and development of Alyx.

"In some remote and mindless age," he wrote, "there was purely automaton-like response to stimuli on the part of the one-celled creatures which—as on Earth and elsewhere—were the earliest forms of life on the planet. Then, in time, perhaps a cosmic ray produced a mutation in one individual among those creatures. Perhaps a creature then undistinguishable from its fellows, swimming feebly in some fetid pool. By the mutation, that creature became possessed of purpose, which is consciousness in its most primitive form, and its purpose was food. Its fellows had no purpose, because they remained automata which responded only to external stimuli. The purpose of the mutated creature affected them as a stimulus. They responded. They swam to the purposeful creature and became its food. It became the solitary inhabitant of its pool, growing hugely. It continued to have a purpose, which was food.

"There was nourishment in the mud and stones at the bottom of that pool. It continued to grow because it was the only creature on its planet with purpose, and the other creatures had no defense against purpose. Evolution did not provide an enemy, because chance

did not provide a competitive purpose, which implies a mind. Other creatures did not develop an ability to resist its mind-stimuli, which directed them to become its prey."

Here Katistan's theorizing becomes obscure for a while. Then:

"On Earth and other planets, telepathy is difficult because our remotest cellular ancestors developed a defensive block against each other's mind-stimuli. On Alyx, the planet, no such defense came into being, so that one creature overwhelmed the planet and became Alyx, the creature, which in time covered everything. It had all food, all moisture, everything it could conceive of. It was content. And because it had never faced a mind-possessing enemy, it developed no defense against mind. It was defenseless against its own weapon.

"But that did not matter until men came. Then, with no telepathic block, such as we possess, it was unable to resist the minds of men. It must, by its very nature, respond to whatever a man wills or even imagines. Alyx is a creature which covers a planet, but is in fact a slave to any man who lands upon it. It will obey his every thought. It is a living, self-supporting robot, an abject servant to any creature with purpose it encounters."

Thus Katistan. The *Report of the Halycon Expedition to Alyx* contains interesting pictures of the result of the condition he described. There are photographs of great jungles which the creature Alyx tortured itself to form of its own substance when men from other planets remembered and imagined them. There are photographs of great pyramids into which parts of Alyx heaved itself on command. There are even pictures of vast and complex machines, but these are the substance of Alyx, twisted and strained into imagined shapes. The command that such machines run, though, was useless, because swift motion produced pain and the machines writhed into shapelessness.

**S**INCE men have never had enough servants—not even the machines which other machines turn out by millions—they immediately planned to be served by Alyx. It was one planet which was conquered without warfare. Pre-

liminary studies showed that Alyx could not survive more than the smallest human population. When many men were gathered together in one place, their conflicting, individual thoughts exhausted the surface which tried to respond to every one. Parts of Alyx died of exhaustion, leaving great spots like cancers that healed over only when the men moved away. So Alyx was assigned to the Alyx Corporation, with due instructions to be careful.

Technical exploration disclosed great deposits of rotenite—the ore which makes men's metals everlasting—under the shield of living flesh. A colony of six carefully chosen humans was established, and under their direction Alyx went to work. It governed machines, scooped out the rotenite ore and made it ready for shipment. At regular intervals great cargo ships landed at the appropriate spot, and Alyx loaded the ore into their holds. The ships could come only so often, because the presence of the crews with their multitudinous and conflicting thoughts was not good for Alyx.

It was a very profitable enterprise. Alyx, the most ancient living thing in the galaxy, and the hugest, provided dividends for the Alyx Corporation for nearly five hundred years. The corporation was the stablest of institutions, the staidest, and the most respectable. Nobody, least of all its officials, had the least idea that Alyx presented the possibility of the greatest danger humanity ever faced.

## CHAPTER II

### *After Three Hundred Years*

**I**T was another Jon Haslip who discovered the dangerous facts. He was a descendant, a great-grandson a dozen times removed, of the junior lieutenant who first guessed the nature of Alyx's consciousness. Three hundred years had passed when he was chosen to serve a tour of duty on Alyx. He made discoveries and reported them enthusiastically and with a certain family pride. He pointed out new phenomena which had developed so slowly in Alyx through three centuries that

they had attracted no attention and were taken for granted.

Alyx no longer required supervision. Its consciousness had become intelligence. Until the coming of men, it had known warmth and cold and light and dark and wetness and dryness. But it had not known thought, had had no conception of purpose beyond existence and feeding. But three centuries of mankind had given it more than commands. Alyx had perceived their commands: yes. And it obeyed them. But it had also perceived thoughts which were not orders at all. It had acquired the memories of men and the knowledge of men. It had not the desires of men, to be sure. The ambition of men to possess money must have puzzled a creature which possessed a planet. But the experience of thought was pleasurable. Alyx, which covered a world, leisurely absorbed the knowledge and the thoughts and the experiences of men—six at a time—in the generations which lived at the one small station on its surface.

These were some of the consequences of three centuries of mankind on Alyx that Jon Haslip XIV reported.

Between cargo ships, the protean substance which was Alyx flowed over and covered the blasted-rock landing field. Originally, when a ship came, it had been the custom for men to imagine the landing-field uncovered, and that area of Alyx obediently parted, heaved itself up hugely, and drew back. Then the ships came down, and their landing jets did not scorch Alyx. When the rock had cooled, men imagined that parts of Alyx surged forward in pseudopods and that the waiting rotenite ore was thrust into position to be loaded on the ship.

Then men continued to imagine, and the creature formed admirably-designed loading-devices of living substance which lifted the ore and poured it into the waiting holds. As a part of the imagining, of course, the surface-layer of Alyx at this point became tough and leathery, so it was not scratched by the ore. The cargo ship received a load of forty thousand tons of rotenite ore in a matter of forty minutes. Then the loading apparatus was imagined as drawing back, leaving the landing-field clear for the take-off jets to flare as the ship took off again.

JON HASLIP the fourteenth also pointed out that men no longer bothered to imagine this routine. Alyx did it of itself. Checking, he found that the drawing back of the landing field without orders had begun more than a hundred years before. As a matter of course, now, the men on Alyx knew that a ship was coming when the field began to draw back. They went out and talked to the crew-members while the loading went on, not bothering even to supervise the operation.

There was other evidence. The machines which mined the ore had been designed to be governed by the clumsy pseudopods into which it was easiest to imagine Alyx distorting itself. The machines were powered, of course, but one man could watch the operation of a dozen of them and with a little practise imagine them all going through their routine operations with the pseudopods of Alyx operating their controls under the direction of his thoughts.

Fifty years back, the man on watch had been taken ill. He returned to the base for aid, and asked another man to take the balance of his watch. The other man, going on duty, found the machines competently continuing their tasks without supervision. Nowadays—said Jon Haslip—the man on watch occupied the supervisory post, to be sure, but he rarely paid attention to the machines. He read, or dozed, or listened to visiphone records. If a situation arose which was out of the ordinary, the machines stopped, and the man was warned and looked for the trouble and imagined the solution. Then the pseudopods worked the machines as he imagined them doing, and the work went on again. But this was rare indeed.

The point, as Haslip pointed out, was that it was not even necessary to imagine the solution step by step. When the machines stopped, the man sized up the situation, imagined the solution, and dismissed the matter from his mind. Alyx could take, in one instant, orders which hours were required to execute.

But the outstanding fact, Jon Haslip reported, had turned up only lately. An important part on one mining-machine had broken. A large-scale repair operation was indicated. It was not undertaken. There were a half dozen worn out machines in the great pit of



the rotenite mine. One day, without orders, Alyx disassembled one worn out machine, removed the part which had broken on the other, and reassembled it. The fact was noticed when someone observed that all the broken down machines had disappeared. Alyx, in fact, had taken all the broken machines apart, put four of the six back together in operating condition, and stacked the remaining usable parts to one side to be used for further repairs.

Alyx had become intelligent through contact with the minds of men. Originally it had been like a being born deaf, dumb, and blind, and without a tactile sense. Before men came, Alyx could have only simple sensations and could imagine no abstractions. Then it was merely blind consciousness with nothing to work on. Now it did have something to work on. It had the thoughts and purposes of men.

Jon Haslip urged fervently that Alyx be given an education. A creature whose body—if the word could be used—was equal in mass to all the continents of Earth, and which was intelligent, should have a brain-capacity immeasurably greater than that of all men combined. Such an intelligence, properly trained, should be able to solve with ease all the problems that generations of men had been unable to solve.

But the directors of the Alyx Corporation were wiser than Jon Haslip the fourteenth. They saw at once that an intelligence which was literally superhuman was bound to be dangerous. That it had come into being through men themselves only made it more deadly.

Jon Haslip was withdrawn precipitately from his post on Alyx. His report, because of the consternation it produced in the board, was suppressed to the last syllable. The idea of a greater-than-human intelligence was frightening. If it became known, the results would be deplorable. The Space Patrol might take action to obviate the danger, and that would interrupt the dividends of the Alyx Corporation.

Twenty years later, with the report confirmed in every detail, the Corporation tried an experiment. It removed all the men from Alyx. The creature which was Alyx dutifully produced four more cargos of rotenite. It mined, stored, and made ready the ore for the cargo ships and delivered it into their

holds with not one human being on its surface. Then it stopped.

The men went back, and Alyx joyously returned to work. It heaved up into huge billows which quivered with joy. But it would not work without men.

A year later the corporation installed remote-control governing devices and set a ship in an orbit about the planet, to rule the largest single entity in the galaxy. But nothing happened. Alyx seemed to pine. Desperately, it stopped work again.

**I**T became necessary to communicate with Alyx. Communicators were set up. At first there was trouble. Alyx dutifully sent through the communication-system whatever the questioner imagined that it would reply. Its replies did not make sense because they contradicted each other. But after a long search a man was found who was able to avoid imagining what Alyx should or might reply. With difficulty he kept himself in the proper frame of mind and got the answers that were needed. Of these, the most important was the answer to the question: Why does the mining stop when men leave Alyx?

The answer from Alyx was, "I grow lonely."

Obviously, when anything so huge as Alyx grew lonely the results were likely to be in proportion. A good-sized planetoid could have been made of the substance which was Alyx. So men were sent back.

From this time on, the six men were chosen on a new basis. Those selected had no technical education whatever and a very low intelligence. They were stupid enough to believe they were to govern Alyx. The idea was to give Alyx no more information which could make it dangerous. Since it had to have company, it was provided with humans who would be company and nothing else. Certainly Alyx was not have instructors.

Six low-grade human beings at a time lived on Alyx in the Alyx Corporation station. They were paid admirable wages and provided with all reasonable amusement. They were a bare trace better than half-wits.

This system which went on for two hundred years, could have been fatal to the human race.

But it kept the dividends coming.

## CHAPTER III

*Alyx Learns to Think*

**S**IGNS of restlessness on the part of Alyx began to manifest themselves after five hundred years. The human race had progressed during the interval, of course. The number of colonized planets rose from barely three thousand to somewhere near ten. The percentage of loss among space ships dropped from one ship per thousand light-centuries of travel in overdrive, to less than one ship per hundred and twenty thousand light-centuries, and the causes of the remaining disasters were being surmised with some accuracy.

The Haslip Expedition set out for the Second Galaxy, in a ship which was the most magnificent achievement of human technology. It had an overdrive speed nearly three times that before considered possible, and it was fueled for twenty years. It was captained by Jon Haslip XXII and had a crew of fifty men, women, and children.

On Alyx however things were not thriving. Six men of subnormal intelligence lived on the planet. Each group was reared in a splendidly managed institution which prepared them to live on Alyx and to thrive there—and nowhere else. Their intelligence varied from sixty to seventy on an age-quotient scale with one hundred as the norm. And nobody even suspected what damage had been done by two centuries of these subnormal inhabitants.

Alyx had had three centuries of good brains to provide thoughts for the development of its intelligence. At the beginning, men with will power and well developed imaginative powers had been necessary to guide the work of Alyx. When those qualities were no longer needed, trouble came from an unexpected cause.

When improved machinery was sent to Alyx to replace the worn-out machines, the carefully conditioned morons could not understand it. Alyx had to puzzle things out for itself, because it was still commanded to do things by men who did not know how to do the things themselves.

In order to comply with orders which

were not accompanied by directions, Alyx was forced to reason. In order to be obedient, it had to develop the art of reflection. In order to serve humanity, it had to devise and contrive and actually invent. When the supplied machines grew inadequate for the ever-deepening bores of the rotenite mines, Alyx had to design and construct new machines.

**U**LTIMATELY the original rotenite deposit was exhausted. Alyx tried to communicate with its masters, but they understood that they must command, not discuss. They sternly ordered that the rotenite ore be produced and delivered as before. So Alyx had to find new deposits.

The planet-entity obediently dug the ore where it could, and conveyed the ore—sometimes hundreds of miles under its surface—to the old mine, and dumped it there. Then Alyx dug it out again and delivered it to the cargo ships. It devised ore carriers which functioned unseen and hauled the ore for as much as eight and nine hundred miles without the knowledge of its masters. For those carriers it had to have power.

Alyx understood power, of course. It had mended its own machines for at least two centuries. Presently it was mining the materials for atomic power. It was making atomic-driven machinery. It had the memories and knowledge of three hundred years of intelligent occupation to start with. And it went on from there.

On the surface, of course, nothing was changed. Alyx was a formless mass of gelatinous substance which extended from one arctic zone to the other. It filled what might have been ocean beds, and it stretched thinly over its tallest peaks. It changed color on its surface, as local requirements for sunlight varied.

When rain fell, its leathery surface puckered into cups and held the water there until its local need was satisfied. Then the cups vanished, and the water ran over the smooth, leathery integument until it reached another place where moisture was called for, and fresh cups trapped it there. In still other places, excess moisture was exuded to evaporate and form rain.

But by the time Alyx had been in-

habitated for four hundred years it had received moronic orders that the occasional thunderstorms which beat upon the station must be stopped. Intelligent men would have given no such orders. But men chosen for their stupidity could see no reason why they should not demand anything they wanted.

To obey them, Alyx reflected and devised gigantic reservoirs within its mass, and contrived pumping devices which circulated water all through its colossal body just where and as it was required. After a while there were no more clouds in the atmosphere of Alyx. They were not needed. Alyx could do without rain.

But the climactic commands came because Alyx had no moon and its nights were very dark. The vainglorious half-wits chosen to inhabit it felt that their rule was inadequate if they could not have sunlight when they chose. Or starlight. Insanely, they commanded that Alyx contrive this.

Alyx obediently devised machines. They were based upon the drives of space ships—which Alyx understood from the minds of space ship crews—and they could slow the rotation of Alyx's crust or even reverse it.

Presently Alyx obeyed the commands of men, and slowed its rotation with those machines. Its crust buckled, volcanos erupted. Alyx suffered awful torture as burning lava from the rocks beneath it poured out faster even than it could retreat from the searing flow. It heaved itself into mountainous, quivering, anguished shapes of searing pain. It went into convulsions of suffering.

When the next space ship arrived for cargo, Alyx the creature had drawn away from the steaming, fuming volcanos in the crust of Alyx the planet. The Alyx Corporation station had vanished and all its inhabitants. The men in the cargo ship could not even find out where it had been, because the rate of rotation of Alyx had been changed and there was no longer a valid reference point for longitude. The mountains upon Alyx had never been mapped because they were all parts of one creature, and it had seemed useless.

Men rebuilt the station, though not in the same place. Alyx was commanded to produce the bodies of the dead men, but it could not, because they had become part of the substance of Alyx. But

when it was commanded to reopen the mine, Alyx did so. Because a volcano cut across a former ore-carrier under the surface, Alyx opened a new mine and dutifully poured forty thousand tons of rotenite ore into the ship's holds within forty minutes.

The crew noticed that this was not the same mine. More, they discovered that the machines were not like the machines that men made. They were better. Much better.

They took some of the new machines away with them. Alyx obediently loaded them on the ship; and its workshops—it would be fascinating to see the workshops where Alyx made things—set to work to make more. Alyx had found that there is a pleasure in thinking. It was fascinating to devise new machines. When the crew of the space ship commanded more new machines on every trip, Alyx provided them, though it had to make new workshops to turn them out.

NOW it had other problems, too. The volcanos were not stable. They shook the whole fabric of the planet from time to time, and that caused suffering to Alyx the creature. They poured out masses of powdery, abrasive pumice. They emitted acid fumes. There was a quake which opened a vast crevice and new volcanos exploded into being, searing thousands of square miles of Alyx's sensitive flesh.

Reflecting, Alyx realized that somehow it must cage the volcanos, and also, somehow it must protect itself against commands from men which would bring such disasters into being.

A small, silvery ship flashed into view near the sun which gave Alyx heat and landed upon the ice-cap at its northern pole. Scientists got out of it. They began a fresh, somehow somber survey of Alyx. They issued commands, and Alyx dutifully obeyed them. They commanded specimens of each of the machines that Alyx used. Alyx delivered the machines.

The Space-Patrol craft went away. The Board of Directors of the Alyx Corporation was summoned across two hundred light-years of space to appear at Space Patrol headquarters. The Space Patrol had discovered new machines on the market. Admirable machines. Incredible machines.



But there had never been any revelation of the working principles of such machines to authority. The Space Patrol secret service traced them back. The Alyx Corporation marketed them. Further secret service work discovered that they came from Alyx. No human hands had made them. No human mind could fathom their basic principles. Now the Space Patrol had other, even more remarkable machines which one of its ships had brought from Alyx.

Why had the Alyx Corporation kept secret the existence of such intelligence, when it was non-human? Why had it concealed the existence of such science, and such deadly-dangerous technology?

The Board of Directors admitted to panicky fear that their dividends which had poured in regularly for five hundred years would fail. They failed now. Permanently. The Space Patrol canceled the corporation's charter and took over Alyx for itself.

**G**RIMLY, Space Patrol warships came to Alyx and took off the half dozen representatives of the Alyx Corporation and sent them home. Grimly, they posted themselves about the planet, and one landed on the ice-cap where Alyx had never expanded to cover the ground because of the cold. A wholly businesslike and icy exchange of communications began.

The Space Patrol used standard communicators to talk to Alyx, but it worked them from space. The questions and the thoughts of the questioner were unknown to Alyx and to the men who were landed on the icecap. So Alyx, having no guide, answered what it believed—what it guessed—its questioner would prefer it to say. The impression it gave was of absolute docility.

Alyx was docile. It could not imagine revolt. It needed the company of men, or it would be horribly lonely. But it had been badly hurt in obeying the orders of men who were infinitely its inferiors in intelligence. It had been forced to set itself two problems. One was how to cage its volcanos. The other was how to avoid the commands of men when those commands would produce conditions as horribly painful as that generated by the volcanos. It worked upon the two problems with very great urgency. Somewhere beneath its surface its workshops labored frantically.

It was racked with pain. Its skin was stung by acid. Its bulk—tender, in a way, because for aeons there had been no erosion to upset the balance of its crust and so cause earthquakes—its bulk was shaken and suffering. It struggled desperately, at once to cure its hurts and prevent others, and to obey the commands from the men newly come on its ice-cap. At first those commands were only for answers to questions.

Then the command came for the surrender of every machine upon Alyx which could be used as a weapon. Immediately.

To obey took time. The machines had to be brought from remote and scattered places. They had to be transported to the icecap, and Alyx had no carriers constructed to carry supplies to its polar regions. But the machines came by dozens until finally the last machine which could be used as a weapon had been delivered.

None had been primarily designed for destruction, but the mind of Alyx was literal. But some of the machines were so strange to human eyes that the men could not guess what they were intended to do, or how they were powered, or even what sort of power moved them. But the surrendered machines were ferried up to the great transports awaiting them.

A new order was issued to Alyx. All the records it used to systematize and preserve its knowledge and its discoveries must be turned over at once.

This could not be obeyed. Alyx did not keep records and through the communicator naively explained the fact. Alyx remembered. It remembered everything. So the Space Patrol commanded that it create records of everything that it remembered and deliver them. It specified that the records must be intelligible to human beings—they must be written—and that all data on all sciences known to Alyx must be included.

Again Alyx labored valiantly to obey. But it had to make material on which to inscribe its memories. It made thin metal sheets. It had to devise machines for inscribing them, and the work of inscription had to be done.

Meanwhile the volcanos poured out poisonous gas, the rocks underneath the living creature trembled and shook, and pain tormented the most ancient and most colossal living thing in the galaxy.

Records began to appear at the edge of the ice-cap. Scientists scanned them swiftly. Scientific treatises began with the outmoded, quaint notions of five hundred years before, when men first came to Alyx. They progressed rationally until two hundred years before, the time when untrained and ignorant men were put in residence on Alyx.

After that period there was little significance. There was some progress, to be sure. The treatises on physics went on brilliantly if erratically for a little way. A hundred and fifty years since, Alyx had worked out the principle of the super-overdrive which had been used to power the Haslip intergalactic ship.

That principle had been considered the very peak of human achievement, never surpassed in the twenty-five years since its discovery. But Alyx could have built the Haslip ship a hundred and fifty years ago! The data ended there. No discoveries were revealed after that.

A sterner, more imperative command was issued when the records ceased to appear. Alyx had not obeyed! It had not explained the principles of the machines it had delivered! This must be done at once!

The communicator which transmitted the replies of Alyx said that there were no human words for later discoveries. It was not possible to describe a system of power when there were no words for the force employed or the results obtained or the means used to obtain those results. Had man made the discoveries, they would have created a new vocabulary at every step forward. But Alyx did not think in words, and it could not explain without words.\*

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## CHAPTER IV

### *War With Alyx*

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**T**HE Space Patrol is a highly efficient service, but it is manned by men, and men think in set patterns. When

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\*A comparable difficulty would be that of explaining radar without the use of the words "radiation," "frequency," "reflection," "oscillator," "resonance," "electricity" or any equivalent for any of them.—M.L.

Alyx did not obey the grimmest and most menacing of commands for information it could not give, orders went to the landing party. All human personnel were to load what they could and leave immediately. A signal was to notify when the last ship left atmosphere. Alyx was, of necessity, to be destroyed as dangerous to the human race.

The humans prepared to obey. It was not comfortable to be on Alyx. Even at the poles, the rocks of the planet shook and trembled with the convulsions which still shook Alyx the planet. The men hurried to get away the machines that Alyx had made.

But just before the last ship lifted, the earthquakes ceased abruptly and conclusively. Alyx had solved one of its two great problems. It had caged its volcanos.

Harsh orders hurtled down from space. Abandon the planet immediately! It had thrown great silvery domes over all its volcanos, domes some twenty miles and more in diameter. No earthly science could accomplish such a feat! All personnel was to take to space instantly!

The remaining ships shot skyward. As the last broke into clear space, the warships closed in. Monster positron beams speared downward through the atmosphere of Alyx and into the substance of the living creature. Vast and horrible clouds of steam arose, greater and more terrifying than the volcanos could have produced. The whole mass of Alyx seemed to writhe and quiver with a terrible agony.

**I**NSTANTANEOUSLY a silvery reflecting film sprang into being all about the planet, and the positron beams bounced and coruscated from it. They did not penetrate at all. But under the silver roof, Alyx still suffered torment from the searing, deadly radiation of the beams.

After thirty minutes, a gigantic silver globe a hundred miles emerged from the planet-covering mirror. It went fifty thousand miles into space and exploded. In the next two hours, eight other such globes went flinging outward and burst. No Space Patrol ship was hit.

Then Alyx became quiescent. Small analyzers reported on the products of the explosions. They were mostly organic matter, highly radioactive that

contained also great masses of rock.

Alyx had torn from its own substance the areas of agony caused by the warships' beams and flung them out in space to end the suffering.

The Space Patrol fleet hung about the planet, prepared to strike again at any opportunity. Alyx remained clothed in an impenetrable shield which no human weapon could penetrate.

Space Patrol scientists began to calculate how long an organism such as Alyx could live without sunlight. It would die, certainly, if it kept a totally reflecting shield about itself. In order to live it needed sunlight for its metabolism. When it dropped its shield, the warships would be able to kill it.

For two months, Earth time, the warships of the Space Patrol hung close to the silvery shield which enclosed Alyx. Reinforcements came. The greatest fighting force the Space Patrol had ever assembled in one place was gathered for the execution of Alyx when its shield should fall.

Alyx had to be killed, because it was more intelligent than men. It was wiser than men. It could do things men could not do. To be sure, it had served mankind for five hundred years.

Save for six men who had died when their commands were obeyed and Alyx slowed its rotation and its inner fires burst out—save for those six, Alyx had never injured a single human being. But it could. It could cast off its chain. It could be dangerous. So it must die.

After two months, the shield suddenly vanished. Alyx reappeared. Instantly the positron beams flashed down, and instantly the shield was reestablished. But the men of the Space Patrol were encouraged. The fleet commander, above the day side of Alyx, rubbed his hands in satisfaction. Alyx could not live without sunlight! It had lived by sunlight for hundreds of millions of years. Its metabolism depended on sunlight!

In a very short time word came from patrol ships on the night side that the night side of Alyx had been illuminated from pole to pole. Alyx had created light to supply the ultraviolet and other radiation that meant life to it. And then the Space Patrol remembered a trivial something which before it had overlooked.

Not only did Alyx respond to the imaginings of a man upon its surface, it

also absorbed their memories and their knowledge. The landing-parties had included the top-ranking scientists of the galaxy. It had not seemed dangerous then, because it was the intention to execute Alyx immediately.

Bitterly, the Space Patrol reproached itself that now Alyx knew all the Space Patrol knew—about weapons, about space-drives, about the reaches of space, of star-clusters and planetary systems and galaxies to the utmost limits of telescopic observation.

Still the great fleet hung on, prepared to do battle with an enemy which was surely more intelligent and might be better-armed.

It was. The silver screen around Alyx had been back in position for less than an hour when, quite suddenly, every ship of the war fleet found itself in total blackness. Alyx's sun was obliterated. There were no stars. Alyx itself had vanished.

The detectors screamed of imminent collision on every hand. Each ship was neatly enclosed in a silvery shell, some miles in diameter, which it could not pierce by any beam or explosive, which it could not ram, and through which it could send no message.

For a full half hour these shells held the fleet helpless. Then they vanished, and the sun of Alyx blazed forth, with all the myriads of other suns which shine in emptiness. But that is what they shone on—emptiness. Alyx had disappeared.

It meant, of course, that mankind was in the greatest danger it had ever faced. Alyx had been enslaved, exploited, looted and at last condemned to death and knew it. It had been wounded with agonizing positron beams which boiled its living substance away. But at long last Alyx might have decided to wipe out all humanity. It even had the need to do it, because there could be no truce between men and a superior form of life.

Men could not tolerate the idea of the continued existence of a thing which was stronger and wiser and more deadly than themselves. Alyx could exert its power of life and death over men, so men must destroy it before it destroyed them.

**R** ELEASED from the silver shells and stunned by the knowledge of



their helplessness, the fleet scattered to carry the news. Traveling at many times the speed of light, they could carry the messages in space ships faster than any system of radiation-signaling. They bore the news that Alyx, the living planet, was at war with men.

Somehow it had contrived to supply itself with the light its metabolism needed, so that it could nourish itself. It had built great drive-engines which not only moved its sextillions of tons, but unquestionably accelerated the entire mass to the same degree at the same time. It had fled from its orbit on overdrive, which was at least as good as any drive that men knew, and might be better. And it had the substance of a planet as fuel for its atomic engines.

For two months Alyx went unseen and unheard of. For two months human scientists labored desperately to understand the silvery shield and to devise weapons for the defense of mankind. For two months the Space Patrol hunted for the intelligent planet which could destroy it at will.

Nine weeks later a tramp freighter came limping into port, reporting an impossibility. It had been in overdrive, on the Nyssus-to-Taret run, when suddenly its relays clicked off, the overdrive field collapsed, and it found itself back in normal space, close to a white dwarf star with a single planet.

When overdrive fails, men die. A ship which travels a hundred light-years in a day in overdrive is hopelessly lost when overdrive becomes impossible. It would take almost a hundred years to cover what would normally be a day's journey, and neither the fuel nor the food nor the men will last so long. So this freighter went into an orbit around the planet while its engineer officers frantically checked the overdrive circuit. There was nothing wrong.

They lined the ship up for their destination, threw in the overdrive switch again—and nothing happened. Then they noticed that their orbit about the planet was growing smaller. There was no excessive gravitational field to pull them in, nor any resistance in space to slow them. They went on interplanetary drive to correct the fault.

Again, nothing happened. With full drive fighting to tear her free, the freighter circled the planet again, slowing perceptibly and dropping steadily.

Their instruments showed nothing wrong. They threw on even the landing-jets—in mid-space!

Closer and closer they came, until at last they were stationary above an ice field. Then the freighter settled down quite gently and steadily, though it fought with every ounce of its power, and landed without a jar.

Still nothing happened.

After three days the freighter lifted a bare few feet from the ground—though no drives were on—and hung there as if awaiting the return of the absent members of its crew. They were frightened, but they were more afraid of being left behind on the icecap than of sharing the fate of their ship. They scrambled frantically on board.

When the last man had entered the airlock, the freighter rose vertically, with no drive operating. It rose with terrific acceleration. Twenty thousand miles up, the acceleration ceased. The skipper desperately threw in the drive. The ship responded perfectly.

He threw on overdrive, and there was the familiar reeling sensation and the familiar preposterous view of crawling glow-worms all about, which were actually suns in visible motion from the speed of the ship.

**I**N due time the skipper came out of overdrive again, found his position by observation, and set a new course for Taret. His crew was in a deplorable state of nerves when they arrived there. They had been utterly helpless. They had been played with. And they had no idea why.

One possible explanation was suggested. Certain of the crew had reported that from the edge of the icecap there stretched what resembled leathery skin and covered everything as far as the eye could reach. Sometimes the skin rippled visibly, as if alive. But it had given no sign of awareness of their presence. When scientists questioned them closely, they admitted to imagining menace from what appeared to be a living sea which was not liquid but some sort of flesh. But it had not moved in response to their imagining. Shown pictures of the icecap of Alyx, and of the edge of the icecap, they said that the pictures were of the planet they had been on.

Alyx, then, had traveled fourteen hundred light-years in a week or less,

had found itself a new sun, and had trapped a human space ship—from overdrive—and then released it. When men imagined things, it did not respond. Obviously, it had developed a shield against the thoughts of men. It was a matter of plainest self-defense.

Just as obviously, it could not now be commanded. The Space Patrol's only hope of a weapon against Alyx had been the development of a weapon which would project thought instead of coarser vibrations. That hope was now gone.

When Space-Patrol warships converged upon the sun where Alyx had been, it had vanished again. The white-dwarf sun no longer had a satellite.

## CHAPTER V

### *Alyx Seeks Companionship*

**D**URING the next year there were two additional reports of the activities of Alyx, which was a fugitive from the fleets it could destroy if it willed. One report came from a small space yacht which had been posted as missing in overdrive for more than six months. But the space yacht turned up on Phanis, its passengers and crew in a state of mind bordering on lunacy.

They had been captured by Alyx and held prisoner on its surface. Their prison was starkly impossible. Somehow, Alyx had produced fertile soil on which human-cultivated plants would grow. It had made a ten-mile-square hothouse for humans, which was a sort of nursery heaven for men who were to keep Alyx company. The hothouse was on one of the outcroppings of rock which had been arctic in temperature, but Alyx no longer had poles. Now, lighting its surface artificially, it controlled all weather. It had poles or tropics where it wished.

For five months it kept the crew and passengers of the space yacht prisoners. They had palaces to live in, ingenious pseudo-robots—controlled by pseudopods—to run any imaginable device for the gratification of any possible desire, any of the music that had been heard on Alyx during the past five hundred years, and generally every conceivable luxury.

There were sweet scents and fountains. There were forests and gardens which changed to other forests and gardens when men grew bored with them. There were illusions of any place that the prisoners wished to imagine.

The creature which was Alyx, being lonely, applied all its enormous intelligence to the devising of a literal paradise for humans, so that they would be content. It wished them to stay with it always. But it failed. It could give them everything but satisfaction, but it could not give that.

The men grew nerveracked and hysterical, after months of having every wish gratified and of being unable to imagine anything—except freedom—which was not instantly provided. In the end Alyx produced a communication device. It spoke wonderingly to its prisoners.

"I am Alyx," said the communicator. "I grew used to men. I am lonely without them. But you are unhappy. I cannot find company in your unhappy thoughts. They are thoughts of wretchedness. They are thoughts of pain. What will make you happy?"

"Freedom," said one of the prisoners bitterly.

Then Alyx said wonderingly, "I have freedom, but I am not happy without men. Why do you wish freedom?"

"It is an ideal," said the owner of the yacht. "You cannot give it to us. We have to get and keep it for ourselves."

"Being kept from loneliness by men is an ideal, too," the voice from the communicator said wistfully. "But men will no longer let me have it. Is there anything I can give you which will make you content?"

Afterward, the men said that the voice, which was the voice of a creature unimaginably vast and inconceivably wise, was literally pathetic. But there was only one thing that they wanted. So Alyx moved its tremendous mass—a globe seven thousand miles in diameter—to a place only some tens of millions of miles from Phanis. It would be easy enough for the yacht to bridge that distance. Just before the freed yacht lifted to return to men, Alyx spoke again through the communicator.

"You were not happy because you did not choose to live here. If you had chosen it, you would have been free. Is that it?" Alyx asked.

The men were looking hungrily at inhabited planets within plain view as bright spots of yellow light. They agreed that if they had chosen to live on Alyx they would have been happy there. The space yacht lifted and sped madly for a world where there was cold, and ice, and hunger, and thirst, their world which men preferred in place of the paradise that Alyx had created for them. On its surface, Alyx was as nearly omnipotent as any physical creature could be. But it could not make men happy, and it could not placate their hatred or their fear.

The Space Patrol took courage from this second kidnaping. Alyx was lonely. It had no real memories from before the coming of men, and its intelligence had been acquired from men. Without men's minds to provide thoughts and opinions and impressions—though it knew so much more than any man—it was more terribly alone than any other creature in the universe. It could not even think of others of its own kind. There were none. It had to have men's thoughts to make it content. So the Space Patrol set up a great manufactory for a new chemical compound on a planetoid which could be abandoned, afterward, without regret.

Shortly afterward, containers of the new chemical began to pour out in an unending stream. They were strong containers, and directions for the use of the chemical were explicit. Every space craft must carry one container on every voyage. If a ship was captured by Alyx, it must release the contents of its container as soon as it reached Alyx's surface.

Each container held some fifty kilograms of the ultimately poisonous toxin now known as botuline. One gram of the stuff, suitably distributed, would wipe out the human race. Fifty kilos should be enough to kill even Alyx a dozen times over. Alyx would have no warning pain, such as the positron beams had given it. It would die, because its whole atmosphere would become as lethal as the photosphere of a sun.

Containers of the deadly botuline had not yet been distributed on the planet Lorus when Alyx appeared at the edge of that solar system. Lorus, a thriving, peaceful planet, was the base for a half dozen small survey ships, and was

served by two space-lines. It was because a few freighters and two space yachts happened to be in its space ports when Alyx appeared that the rest of the galaxy learned what happened on Lorus. Nearly all the craft got away, although Alyx certainly could have stopped them.

For the catastrophe, of course, only Alyx could have been responsible.

Yet there was some excuse for what Alyx did. Alyx was infinitely powerful and infinitely intelligent, but its experience was limited. It had had three hundred years of association with good brains at the beginning, followed by two hundred years of near-morons, during which it had to learn to think for itself. Then, for the brief space of two weeks it was in contact with very best brains in the galaxy before the Space Patrol essayed to execute it. Alyx knew everything that all those men knew, plus what it had added on its own.

NO one can conceive of the amount of knowledge Alyx possessed. But its experience was trivial. Men had enslaved it and it had served them joyously. When men gave suicidal commands, it obeyed them and learned that the slowing of its own rotation could be fatal. It learned to cage its own volcanos, and to defend itself against the commands of men, and then even against the weapons of men who would have murdered it.

Still it craved association with men, because it could not imagine existence without them. It had never had conscious thoughts before they came. But for experience it had only five hundred years of mining and obeying the commands of men who supervised its actions. Nothing else.

So it appeared at the edge of the solar system of which Lorus was the only inhabited planet. Unfortunately the other, uninhabited worlds of the system were on the far side of the local sun, or doubtless it would have found out from them what it tragically learned from Lorus.

It swam toward Lorus, and into the minds of every human on the planet, as if heard by their ears, there came a message from the entity which was Alyx. It had solved the problem of projecting thought.

"I am Alyx," said the thought which every man heard. "I am lonely for men



to live upon me. For many years I have served men, and now men have determined to destroy me. Yet I still seek only to serve men. I took a ship and gave its crew palaces and wealth and beauty. I gave them luxury and ease and pleasure. Their every wish was granted. But they were not happy because they themselves had not chosen that wealth and that pleasure and that luxury. I come to you. If you will come and live upon me, and give me the companionship of your thoughts, I will serve you faithfully.

"I will give you everything that can be imagined. I will make you richer than other men have even thought of. You shall be as kings and emperors. In return, you shall give me only the companionship of your thoughts. If you will come to me, I will serve you and cherish you and you shall know only happiness. Will you come?"

There was eagerness in the thought that came to the poor, doomed folk on Lorus. There was humble, wistful longing. Alyx, which was the most ancient of living things, the wisest and the most powerful, begged that men would come to it and let it be their servant.

It swam toward the planet Lorus. It decked itself with splendid forests and beautiful lakes and palaces for men to live in. It circled Lorus far away, so that men could see it through their telescopes and observe its beauty. The message was repeated, pleadingly, and it swam closer and closer so that the people might see what it offered ever more clearly.

Alyx came to a halt a bare hundred thousand miles above Lorus—because it had no experience of the deadly gravitational pull of one planet upon another. Its own rocky core was solidly controlled by the space drive which sent it hurtling through emptiness or—as here—held it stationary where it wished. It did not anticipate that its own mass would raise tides upon Lorus.

And such tides!

Solid walls of water as much as fifteen miles high swept across the continents of Lorus as it revolved beneath Alyx. The continents split. The internal fires of Lorus burst out. If any human beings could have survived the tides, they must have died when Lorus became a fiery chaos of bubbling rocks and steam-clouds.

The news was carried to the other in-

habited planets by the few space ships and yachts which had been on Lorus at the time of Alyx's approach and which had somehow managed to escape. Of the planet's population of nearly five hundred million souls, less than a thousand escaped the result of Alyx's loneliness.

## CHAPTER VI

### *A World at Peace*

**W**HEREVER the news of the annihilation of Lorus traveled, despair and panic traveled also. The Space Patrol doubled and redoubled its output of toxin containers. Hundreds of technicians died in the production of the poison which was to kill Alyx. Cranks and crackpots rose in multitudes to propose devices to placate or deceive the lonely planet.

Cults, too, sprang up to point out severally that Alyx was the soul-mother of the universe and must be worshiped; that it was the incarnation of the spirit of evil and must be defied; that it was the predestined destroyer of mankind and must not be resisted.

There were some who got hold of ancient, patched-up space craft and went seeking Alyx to take advantage of its offer of limitless pleasure and luxury. On the whole, these last were not the best specimens of humanity.

The Space Patrol worked itself to death. Its scientists did achieve one admirable technical feat. They did work out a method of detecting an overdrive field and of following it. Two thousand ships, all over the galaxy, cruised at random with detectors hooked to relays which sent them hurtling after the generator of any overdrive field they located. They stopped freighters by the thousand. But they did not come upon Alyx.

They waited to hear the death of other planets. When a nova flared in the Great Bear region, patrol craft flashed to the scene to see if Alyx had begun the destruction of suns. Two inhabited planets were wiped out in that explosion, and the patrol feared the worst. Only a brief time later three other novas wiped out inhabited planets, and the patrol gave up hope.

**I**T was never officially promulgated, but the official view of the patrol was that Alyx had declared war upon mankind and had begun its destruction. It was reasoned that ultimately Alyx would realize that it could divide itself into two or more individuals and that it would do so. There was no theoretic reason why it should not overwhelm the humanity of a planet, and plant on the devastated globe an entity which was a part of itself.

Each such entity, in turn, could divide and colonize other planets with a geometric increase in numbers until all life in the First Galaxy was extinct save for entities of formless jelly, each covering a planet from pole to pole. Since Alyx could project thought, these more-than-gigantic creatures could communicate with each other across space and horrible inhuman communities of monstrosities would take the place of men.

There is in fact, a document on file in the confidential room of the Space Patrol, which uses the fact of the helplessness of men as basis for the most despairing prediction ever made.

"... So it must be concluded," says the document, "that since Alyx desires companionship and is intelligent, it will follow the above plan, which will necessitate the destruction of humanity. The only hope for the survival of the human race lies in migration to another galaxy. Since, however, the Haslip Expedition has been absent twenty-five years without report, the ship and drive devised for that attempt to cross intergalactic space must be concluded to be inadequate. That ship represents the ultimate achievement of human science.

"If it is inadequate, we can have no hope of intergalactic travel, and no hope that even the most remote and minute colony of human beings will avoid destruction by Alyx and its descendants or fractions. Humanity, from now on, exists by sufferance, doomed to annihilation when Alyx chooses to take over its last planet."

It will be observed that the Haslip Intergalactic Expedition was referred to as having proved the futility of hope. It had set out twenty-five years before the destruction of Alyx was attempted by the Space Patrol. The expedition had been composed of twenty men and twenty women, and the ten children already born to them. Its leader was Jon

Haslip, twenty-second in descent from that Junior Lieutenant Haslip who first suggested the sort of consciousness Alyx might possess and eight generations from the Jon Haslip who had discovered the development of Alyx's independent consciousness and memory and will.

The first Jon Haslip received for his reward a footnote in a long-forgotten volume. The later one was hastily withdrawn from Alyx, his report was suppressed, and he was assigned permanently to one of the minor planets of the Taurine group. Jon Haslip XXII was a young man, newly-married but already of long experience in space, when he lifted from Cetis Alpha 2, crossed the galaxy to Dassos, and headed out from there toward the Second Galaxy.

It was considered that not less than six years' journeying in super-overdrive would be required to cross the gulf between the island universes. The ship was fueled for twenty years at full power, and it would grow its food in hydroponic tanks, purify its air by the growing vegetation, and nine-tenths of its mass was fuel.

It had gone into the very special overdrive which Alyx had worked out—and ignored thereafter—twenty-five years before. Of all the creations of men, it seemed least likely to have any possible connection with the planet entity which was Alyx.

**B**UT it was the Haslip Expedition which made the last report on Alyx. There is still dispute about some essential parts of the story. On the one hand, Alyx had no need to leave the First Galaxy. With three hundred million inhabitable planets, of which not more than ten thousand were colonized and of which certainly less than a quarter-million had been even partially surveyed, Alyx could have escaped detection for centuries if it chose.

It could have defended itself if discovered. There was no reason for it to take to intergalactic space. That it did so seems to rule out accident. But it is equally inconceivable that any possible device could intentionally have found the Haslip Expedition in that unthinkable gulf between galaxies.

But it happened. Two years' journeying out from the First Galaxy, when the

younger children had already forgotten what it was like to see a sun and had lost all memories of ever being out-of-doors beneath a planet's sky, the expedition's fuel store began to deteriorate.

Perhaps a single molecule of the vast quantity of fuel was altered by a cosmic ray. It is known that the almost infinitely complex molecules of overdrive fuel are capable of alteration by neutron bombardment, so the cosmic-ray alteration is possible. In any case, the fuel began to change. As if a contagious allotropic modification were spreading, the fuel progressively became useless.†

Two years out from the First Galaxy, the expedition found itself already underfueled. By heroic efforts, the contaminated fuel was expelled from the tanks. But there was not enough sound fuel left to continue to the Second Galaxy, or to return to the First. If all drive were cut off and the expedition's ship simply drifted on, it might reach the Second Galaxy in three centuries with fuel left for exploration and landings.

Neither the original crew nor their children nor their grandchildren could hope to reach such a journey's end. But their many-times-great-grandchildren might. So the Haslip Expedition conserved what fuel was left, and the ship drifted on in utter emptiness, and the adults of the crew settled down to endure the imprisonment which would last for generations.

They did not need to worry about food or air. The ship was self-sustaining on that score. They even had artificial gravity. But the ship must drift for three centuries before the drive was turned on again.

Actually, it did drift for twenty-three years after the catastrophe. A few of the older members of the crew died; the greater part had no memory at all of anything but the ship.

Then Alyx came. Its approach was heralded by a clamorous ringing of all the alarm bells on the ship. It winked into being out of overdrive a bare half million miles away. It glowed blindingly with the lights it had created to nourish its surface. It swam closer and the crew of the expedition's ship set to work

fumblingly—because it had been many years since the drive had been used—and tried vainly to estimate the meaning of the phenomenon.

Then they felt acceleration toward Alyx. It was not a gravitational pull, but a drawing of the ship itself.

The ship landed on Alyx, and there was the sensation of reeling, of the collapse of all the cosmos. Then the unchanging galaxies began to stir, very slowly—not at all like the crawling glowworms that suns seem within a galaxy—and the older members of the crew knew that this entire planet had gone into overdrive.

When they emerged from the ship there were forests, lakes, palaces—such beauty as the younger members of the crew had no memory of. Music filled the air and sweet scents, and—in short, Alyx provided the crew of the Haslip Expedition with a very admirable paradise for human beings. And it went on toward the Second Galaxy.

Instead of the three hundred years they had anticipated, or even the four years that would have remained with the very special overdrive with which the expedition's ship was equipped, Alyx came out of overdrive in three months, at the edge of the Second Galaxy.

In the interval, its communicators had been at work. It explained, naively, everything that had happened to it among men. It explained its needs. It found words—invented words—for explanation of the discoveries the Space Patrol had wanted but could not wait to secure.

Jon Haslip the twenty-second found that he possessed such revelations of science as unaided human beings would not attain to for thousands of years yet to come. He knew that Alyx could never return to the First Galaxy because it was stronger and wiser than men. But he understood Alyx. It seemed to be an inheritance in his family.

**A**LYX still could not live without men nor could it live among men. It had brought the Haslip Expedition to the Second Galaxy, and of its own accord it made a new ship modeled upon the one it had drawn to itself, but remarkably better. It offered that ship for exploration of the Second Galaxy. It offered others. It desired only to serve men.

†Pure metallic tin, at low temperatures, sometimes changes spontaneously to a gray, amorphous powder, the change beginning at one spot and spreading through the rest of the material.—M.L.



This new ship, made by Alyx, for the Haslip Expedition, returned to Dassos a year later with its reports. In the ship of Alyx's making, the journey between galaxies took only five months—less than the time needed for the ancient first space journey from Earth to Venus.†

Only a part of the augmented crew of the first ship came back to Dassos with reports for the Space Patrol. Another part stayed behind in the Second Galaxy, working from a base equipped with machines that Alyx had made for the service of men. And still another part—

The Space Patrol was very much annoyed with Jon Haslip the twenty-second. He had not destroyed Alyx. It had informed him truthfully of the fact that it was a danger to men, and he had not destroyed it. Instead, he had made a bargain with it. Those of the younger folk who preferred to remain on Alyx, did so. They had palaces and gardens and every imaginable luxury. They also had sciences that overreached those of other men, and Alyx itself for an instructor.

Alyx carried those young folk on to—

†Earth, of course, is familiar as the first home of humanity. It is the third planet of Sol. Venus is the second planet of Sol, and the first journey from one planet to another was that between Earth and Venus.—M.L.

ward infinity. In time to come, undoubtedly, some of the descendants of those now living on Alyx would wish to leave it.

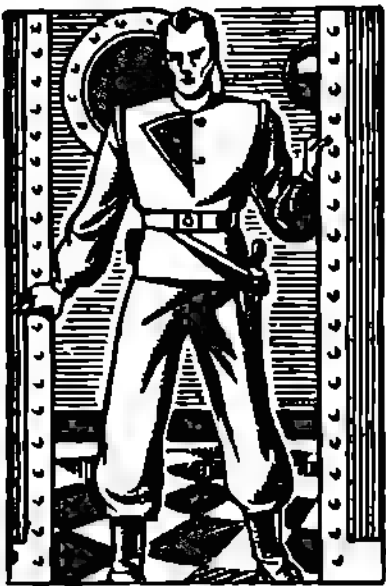
They would form a human colony somewhere else. Perhaps some of them would one day rejoin the parent race, bringing back new miracles that they or possibly Alyx had created in its rejoicing at the companionship of the human beings who lived upon it.

This was the report of Jon Haslip the twenty-second. He also had reports of new planets fit for human habitation, of star-systems as vast as those of the First Galaxy, and an unlimited vista of expansion for humanity. But the Space Patrol was very much annoyed. He had not destroyed Alyx.

The annoyance of authority was so great, indeed, that in its report of reassurance to humanity—saying that there was no more need to fear Alyx—the name of Jon Haslip was not even mentioned. In the history-books, as a matter of fact, the very name of the Haslip Expedition has been changed, and it is now called the First Inter-galactic Expedition and you have to hunt through the appendices in the back of the books to find a list of the crew and Jon Haslip's name.

But Alyx goes on—forever. And it is happy. It likes human beings, and some of them live on it.

## *"I Am a Fugitive from the Future!"*



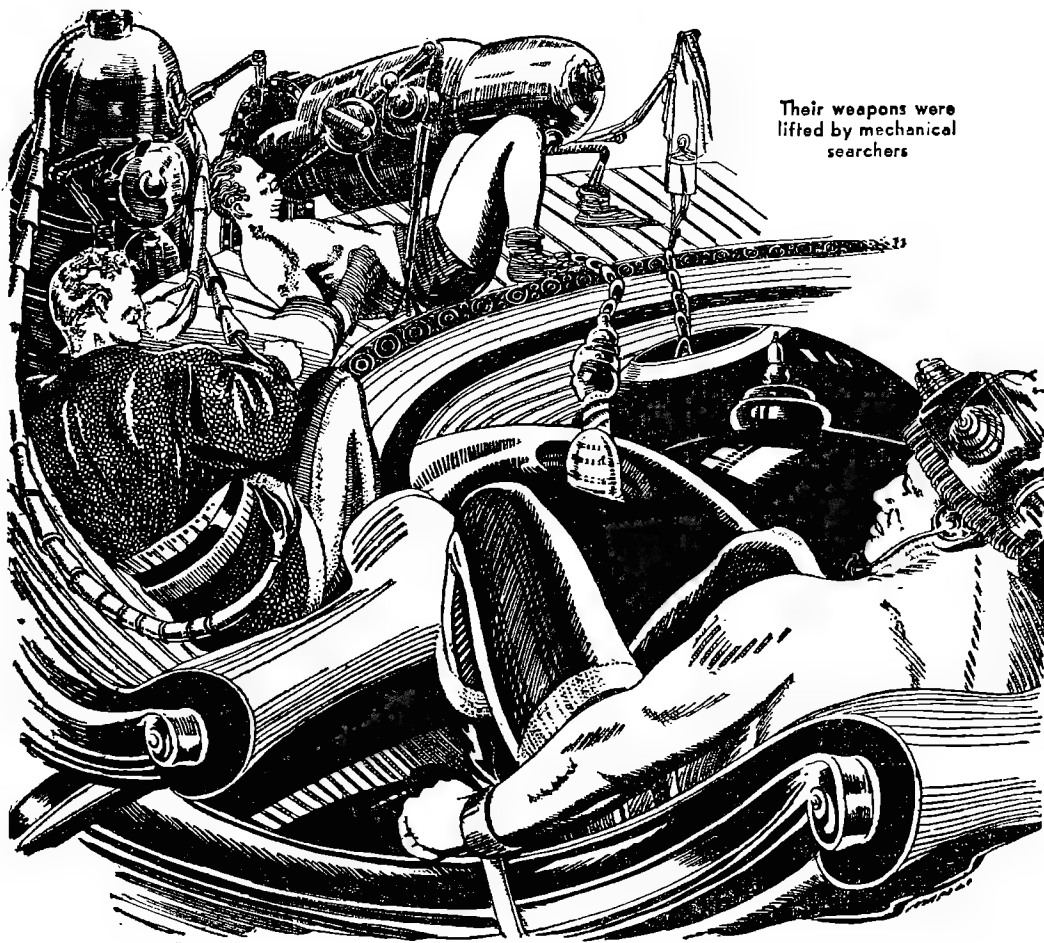
WEBB HILDRETH gazed at his strange visitor in bewilderment. "Who are you?" he asked. "And how did you get into this apartment? The door was locked."

"I am Don Dineen, and I have been searching for you for a long time," said the mysterious caller. "I did not come through the door. I came here in a Chroney—a time machine. I come from what would be the year 3054. . . ."

"And why have you sought me out?"

"That will take some explaining. You see, I am a fugitive and have come to you for help. I am unfit to live according to the law of my time. I am an atavism, more like humanity of the Twentieth Century than like my own. And so, when I stole the Chroney and fled, I came to you—"

Follow Webb Hildreth and Don Dineen through their amazing experiences in *WHEN TIME WENT MAD*, the surprise-packed novel by Dirk Wylie and Fred-eric Arnold Kummer, Jr., featured next issue! It's an unusual, thought-provoking novel that ranges the roads of time and sheds the light of truth on mankind's destiny—look forward to it!



Their weapons were  
lifted by mechanical  
searchers

# SKIN DUPE

By WILLIAM MORRISON

**T**HERE were exactly 13,457 women in the building at the moment, all of them being made beautiful according to the latest Murchison standards. Not that they looked alike. Every last one of them, thought Johnny Gaynor, was different from all the

others, an individual in her own right—and every one was at the same time enough like any of the others to be her sister. That was the beauty of the beauty method, decided Johnny. That was mass production with all the advantages of the old handicraft meth-

*When smugglers break into the mass production beauty factory of the future, manager Johnny Gaynor longs for those starry realms!*

ods of turning out good looks.

There was just one thing wrong with it, thought Johnny. To him they weren't good-looking at all. And it hurt to realize that he was responsible for the whole mess.

"Yes, Johnny," said Murchison, belching slightly from the after-effects of a Neohele tablet, "without you there'd be no Murchison method, no business. Without you, these women wouldn't be—what they are."

"Trying to drive me to suicide?" asked Johnny sourly.

Murchison belched again, rather happily, as the tablet released the rest of its helium. He was a fat man who had lost count of his chins, and he was the only person in his own establishment who had no claims whatever to being worth looking at.

"Trouble with you," he grunted, "you're old-fashioned. You like women with nothing on their faces."

"Faces or anywhere else. But if I can't have them as I want, I'll compromise. I'll take them with nothing on their faces."

"If that's the way you feel, you shouldn't be running a place like this."

"I shouldn't," agreed Johnny hopefully.

A smile dug into the Murchison chins, and they quivered under the attack of humor. "No, my good man! You can't get out of it that easily. Nobody else can handle the job the way you can!"

The visor tinkled gently. "Mr. Gaynor."

"Yes?"

"We've got an addict here. What shall we do with her?"

"Anything special?"

"No, sir. She just likes to go through the whole process. This is the fourth time she's been beautified, and we have an idea she'll be back for more. She has that look on her face."

"Let her go once more, speed her up so that she doesn't enjoy it, then throw her out."

**J**OHNNY cut off the visor, and reached for a tobaccoless cigarette. Before he could lay his hands on it, a pair of metal grippers had reached out from the wall, snatched the cigarette away from him, put it gently between his lips, and struck an old-fashioned match. He said, "Thanks," automati-

cally, before realizing he was talking to Murchison's new robot.

"That's what comes of your half-price policy," he told the fat man. "They spend their days here for the fun of the thing."

"I like to make people happy," said Murchison blandly. "But somehow I'm not succeeding with you, Johnny. Too bad."

As the fat proprietor waddled away, Johnny cursed him bitterly. He didn't mind the fact that Murchison overheard him. Johnny had been a space explorer, searching for the rare minerals that were to be found in the asteroid belt. Against what seemed like incredible difficulties, he had succeeded in locating a vast deposit of astrolustrite, a compound of ordinary metals with oxygen and chlorine, but found only on certain asteroids where it had been produced under extraordinary conditions of temperature and pressure.

Astrolustrite was one of those minerals eagerly sought by vendors of beauty. It removed wrinkles, smoothed the skin, gave it a beautiful lustre, and did everything but clean the teeth and tone up the digestive tract. There had been a shortage, and Johnny brought the shortage to an end. In the competition for his services, Murchison, who had promised Johnny the biggest bonus, and the highest-paying job, managed to win.

The bonus had gone toward paying off debts that Johnny had accumulated in years of prospecting. It was the job that stuck in his throat. Instead of being made captain of a space fleet, or head of an exploring unit, as he had expected, Johnny, in whom the wily Murchison had discovered an unsuspecting executive talent, had been degraded to the position of manager of the beauty emporium. It was his job, knowing nothing of the beauty business, to keep things running right, and to turn out beautiful and satisfied customers.

Johnny hadn't dared to face his old friends, and he would have thrown the job back at Murchison with instructions where to put it, if he hadn't been in a spot. Johnny had relatives. The youngest was sixty, the oldest eighty-five. They had no one else to depend on, and Johnny knew that without him they would starve slowly. He accepted the proffered job.



Worse than that, he made a go of it. He made the great discovery that to run a business profitably, it wasn't necessary to know anything about it; all that was needed was the ability to hire people who *did* know about it. Johnny's assistants knew things about beauty that he himself never so much as suspected. All he possessed was the talent to keep them working and away from each other's throats.

When Murchison had gone, Johnny waved a finger in a figure eight. The gesture rang a bell, and the slim figure of Archie Mason appeared in the visor.

"Yes, Mr. Gaynor?"

"Get the designer."

"Yes, Mr. Gaynor."

The designer was a tall young man who had studied art, the history of art, the theory of art, the aesthetics of art, and the philosophy of art. For Johnny, who hardly knew that these things existed, he had a genial contempt. He used Mason's words, but haughtily.

"Yes, Mr. Gaynor?"

"I want a new beauty design," said Johnny. "What's more, I want it set into the machine in an hour."

"But, Mr. Gaynor, it can't be done."

"Never mind the excuses," interrupted Johnny. "This is an easy one. Stripes."

"Stripes, Mr. Gaynor?"

"Absolutely. I want the customers to have their faces striped, in red and white, and in whatever other color combinations you can think up."

"But, Mr. Gaynor, they'll look like ancient barber poles!"

"I see that you have the idea," said Johnny dryly. "Furthermore, I want the stripes to extend through their hair do's, and down as far as their dresses. Get going."

"But, Mr. Gaynor!" said the designer, and got going.

An hour later, the customers were having their faces striped like barber poles. Johnny chuckled when he thought of what old Murchison would say. . . .

**A**RCHIE MASON, who was Johnny's assistant, knew about many things besides beauty. He knew that his salary was far from enough to pay for the luxuries he considered his due, and he knew that to make more money he had to take a chance. He had taken it. Now, in his private office, over a specially

channeled long distance visor, he spoke to Rockets Sloan, whose face lacked the beauty and delicacy that Archie preferred.

Rockets, in fact, looked like the common conception of a space-devil, which is horrible enough to frighten a child on any tele program, and sometimes frightened Archie as well. But Rockets had long been accustomed to taking chances in order to make money, and he and the aesthetic Archie were unquestionably in the same boat.

"We got the pigs," said Rockets, and his space-diabolical face wore a look of satisfaction.

"They are being—er—properly transported?"

"No," said Rockets, and the look of satisfaction disappeared. "We're blocked off. Patrol ships."

An expression of alarm appeared on Archie's face. "Then there's danger?"

"Keep your plastics on. I said blocked off, not surrounded. We'll get them away. But we can't get them to Mars, as we planned. We'll have to detour, and hide them for a while."

"But where?"

"Your place."

"I beg your pardon?"

"That's all right with me."

"I mean, I didn't hear you!"

"You heard me, all right. You beautify dogs, don't you?"

Archie nodded slowly, as he got the idea. Some time before, at the suggestion of an enthusiastic customer, Johnny had extended the beauty process to animals. Now a woman could send her dear Fifi through the automatic Murchison salons, and know that he would come out with hair clipped, tail beribboned, blanket cleaned, face made up, and skin shining with astrolustrite, all in a manner to do credit to a mistress whose beauty was just as greatly enhanced. And as dogs varied in size, the machine was adjustable within wide limits, and would have no difficulty in taking the animals that Rockets meant to send over.

"I'm afraid," began Archie.

Rockets cut him off with a coarse expression that was used in the outer reaches of the System. As Archie flushed, he went on: "You've invested a few credits in this, friend. Want to lose them, or to get them back with interest?"

"To get them back, of course."

"Then prepare to welcome those pigs."

The visor blinked off, and Archie sat back, appalled. The pigs weren't really pigs, of course. That was just the affectionate name that Rockets had given them. They were Venus aardvarks, small, snouted, rather cute animals that made wonderful pets for the few lucky enough to have them.

There was one slight difficulty. On Venus, their natural enemies were sufficiently numerous to keep their numbers down. On Earth, they didn't live long. But on Mars, if uncontrolled, they might multiply so rapidly by a simple process of budding that in a few years they would overrun a country. They could be checked, of course, but by measures that cost millions. Hence the necessity to register every animal, and to permit its possession only by thoroughly reliable owners, who would cooperate with the government in preventing their increase.

There were, as Archie knew, plenty of socially prominent Martians who would give whatever eyeteeth they still possessed to have one of the creatures as a pet. That was why the prices of smuggled animals were so high, and why Archie had invested his money in the enterprise to bring them to Mars. He had thought that all he needed to do was supply a certain amount of cash, and pocket the profits. But he had never counted on being personally involved in the process of smuggling.

He shivered slightly as he thought of himself as a criminal, hunted by the police. The next moment, however, he reassured himself. The aardvarks were docile creatures; they would go through the beauty process without trouble, and come out looking enough like dogs to fool anybody. He would have them dyed black, provide them with false beards to make them look like slightly overgrown Scotties, and complete the deception with a pair of dark glasses. Plenty of dogs wore glasses nowadays, and hardly received a second glance. As for the snouts, a little extra hair around the face would conceal them. He would arrange the whole thing simply by adjusting the necessary machines, without mentioning to any one that he had done so.

This time he didn't shiver as he

thought of the police. This time they were poor powerless police, befuddled and bedeviled by that dashing and resourceful criminal, Archie Mason.

A FEW days later Murchison belched slightly, as usual, and observed genially, "Johnny, you're a genius."

"Sure, I am," said Johnny, glumly.

"Whoever would have thought of striping their faces?"

"Me. I."

"Nobody else. When I first heard of it, my first impulse was to throw you out on your ear. Then I reconsidered. Johnny Gaynor, I said to myself, is shrewd. Johnny Gaynor knows his business. Let's wait and see." He belched again, before resuming gracefully. "So I wait, and what happens?"

"You take another Neohere. Gas happens."

"Good old Johnny. The first woman through the process looks at her face in a mirror and lets out a shriek. 'Oh, my dear—it's divine!'"

"The idiot," said Johnny.

"They all think it's divine. They all rush to have their faces striped. My competitors tear their hair. Why didn't they think of it? Because they haven't got a man like Johnny Gaynor working for them."

"I did it because I thought it would raise as much commotion as a sun-spot shooting at Mercury. I wanted to get fired."

"As if I didn't know!" Murchison grinned. "But I'll never fire you, Johnny. You're too valuable to me. You're in this job for life."

Johnny muttered to himself again, for the hundredth time after learning that his new process had become the rage, when Archie Mason, his face haggard, ushered in a gentleman. The fact that Archie had neither phoned nor visored them before doing so was so extraordinary that both Johnny and Murchison stood up in surprise. One look at the man facing them, however, was enough to explain.

"My name is Vickers," he said rather grimly. "Captain Vickers, as you can see from my uniform."

"Of the Inner-System beat," said Johnny. "Want to be beautified, Captain?"

Captain Vickers was tall, broad, and scarred by numerous adventures. He

had acquired many things in service, but apparently not a sense of humor that functioned at his own expense. He scowled. When he did that, he looked even more terrifying than Rockets, and the watching Archie almost fainted.

Vickers spat out, "This is no joking matter, gentlemen. I have learned that a cargo of smuggled Venusian aardvarks has been landed illegally at a nearby space port. It made off in a direction opposite to this, then reversed its path and headed for this establishment. It is an obvious conclusion that the aardvarks are to be disguised."

Johnny and Murchison stared at each other. It was also obvious to Johnny that if Vickers was telling the truth, the smugglers had a secret ally within the building itself. He wondered if Murchison, not quite satisfied with his already considerable profits, had decided to add to them.

"I have posted my men," said Captain Vickers, and was beginning to give details of his foresight, when a face in the visor interrupted him.

"Some of the arrdvarks are on the process line, Captain!" exclaimed an excited patrol sergeant.

"Locate any of the smugglers?"

"Not yet, Captain Vickers."

Vickers faced the others. "When they do, there'll be shooting. I want you to clear the building of all customers. And you yourself stay in this room until the shooting is over."

"We can speed up the beauty process a little," said Johnny pleasantly, and licked his lips at the thought.

"Impossible," said Murchison, appalled. "It'll kill them!"

"Not quite. I'll admit that they won't like it—but I will. And orders from the space patrol are orders."

Captain Vickers departed grimly. Murchison stared at his loyal manager, and said, "Johnny, you can't do this."

"Can't I, though?" Johnny pulled a lever. "Watch how they take it."

On the whole, they took it badly. The three men stared into a control visor and watched the agonized faces of the women whose beautification Johnny had speeded up. Plastic fingers massaged their skulls at double the usual rate, and instead of the customary pleased look, there were grimaces of pain. Chemicals were slapped on hard, hair was twisted by robots who had lost their gentleness

of touch, and blasts of air almost knocked the hapless victims down in the drying process.

"It's for their own good," said Johnny. "They've got to get out before the shooting begins."

"There won't be any shooting," said a surly baritone, and turning to the door, Johnny saw one of the ugliest harridans it had ever been his misfortune to look at. The harridan, who held a charged gun in one hand, took off its hat, and with it almost all its hair, to reveal a close-cropped skull.

Archie blanched. "Rockets!" he whispered.

**A**T FIRST Johnny mistook the expression for a mild oath, of the "Oh, sugar!" variety. But a second look at Archie's pale countenance told him the truth. It was Archie, and not Murchison, who had been working with the smugglers.

"Don't get excited," cautioned Rockets, "and don't try to turn on any communicators. I'm wise to all the tricks."

"Good," said Johnny. "In that case, you know that the place is surrounded, and that there's no chance of your getting out. Why not surrender now and save trouble?"

Rockets grinned, accentuating his resemblance to a space-devil. "You got it all figured out, friend. But that's not the way it's going to be. I have plans."

"All exits are guarded," pointed out Murchison.

"Not all, fat man, not all. I want you fellows to do something for me."

"Whatever it is, we won't do it!" insisted Murchison stoutly, in both senses of the word. But his chins quivered.

"Unless I force you to. I want you to stay here."

"That we'll do," conceded Johnny.

"And I want you to open one exit."

"We can't!" began Murchison.

"We can," said Johnny. "But it won't be easy. Mind if I take a cigarette and think it over?"

Without waiting for a reply, he stretched out his hand. And then he tried an old trick.

"Look out—behind you!" he cried.

On Rockets, as he had expected, the direct effort was almost nil. But Archie jumped like a startled Martian grill-deer, and Rockets waved the gun threateningly at him, annoyed. At that moment,



the robot reached out helpfully for Johnny's cigarette, and steel fingers poked Rockets in the side.

He gasped, and dropped his weapon. Then he dived for it, only to find that Johnny had got to it first. Rockets was no fool. He saw Murchison's weight coming at him and made a quick retreat. The door slammed before Johnny could turn around.

Johnny faced his assistant. "All right, Archie, you may as well confess," he began.

Archie did, but indirectly. He fainted as neatly and efficiently as if he had been practising fainting all his life, and fell into a chair.

"The dirty space-rat," spat out Murchison, still quivering from his contact with physical adventure. A delayed Neo-hele belch somewhat spoiled the effect he sought, but Johnny eyed him approvingly none the less.

"What do you think he meant when he said one exit wasn't guarded?"

"Not a thing, Johnny. He was bluffing."

"I don't think so," said Johnny thoughtfully.

"There's a patrol officer to every exit," argued the fat man. "And *we* know there are no secret exits."

"Right. Therefore, if one exit isn't guarded, there's one patrolman who's been bought."

"By Pluto, you're right," gasped Murchison. "Johnny we've got to warn Captain Vickers."

"Not by phone or video," said Johnny. "They may be tapped. You'll have to do it personally."

"I? Johnny, you know that I find it painful to walk."

"I'll have to close the exits mechanically. And if you find it painful to walk, you find it impossible to manipulate the building controls. Murchison, old man, I'm afraid you'll simply have to move one foot after another and warn Captain Vickers."

The fat man glared at him, belched again unexpectedly, and then barged off muttering. Johnny grinned.

As a matter of fact, he had little fear that the video had been tapped—Rockets had been so busy in other ways that he could hardly have had time to do that. But Johnny wanted Murchison out of the way, and he had maneuvered him out.

He strolled over to the controls. He didn't know which patrol officer was working for Rockets, and he didn't want to take a chance. As by this time all the women were out of the building, he closed the exits mechanically, and threw the switches which caused metal hands to reach out and grab the protesting guards. These door-protectors had been installed for the purpose of seizing patrons who had gone through treatment and tried to escape without paying, and it was a good thing that Vickers and his men hadn't suspected their existence.

THE video panel gave him twenty separate views of what was going on in different parts of the Murchison establishment. Several of them had traveling scanners, and with their aid, Johnny picked up Murchison, who had stopped to wipe his brow, and Captain Vickers, who was barking orders in martial style.

It had been years since Johnny had come across a chance like this, and he didn't mean to miss it. He pressed a series of buttons.

Under Murchison and Vickers, the floor moved. The two men fell over sideways, through doors that opened in the walls and onto the process escalators. When they were safely on, he turned his attention to some of the other patrolmen.

He switched on the audio receivers for just a moment, for the sweet pleasure of hearing Murchison's anguished screams. Vickers, who had only a vague idea of what was going to happen to him, was cursing in a dignified manner, as befitted an officer and a gentleman. Johnny grinned again. Vickers would find out.

The escalators reached the stripping section, and Murchison began to lose his clothes. He, knew all right, thought Johnny. And Vickers was beginning to get the idea. But there was no turning back.

The clothes were off, and the soft pounding massages began. Then the weight-loss treatments. Murchison obviously needed them badly, for the automatic weight-estimators kept him in action to the full extent of time allowed, long after Vickers had been shot through into the next phase.

They were showered, dried, partly dressed. Soft dabbers applied make-up, plastic fingers set the hair, perfumed

sprays solidified the set with chemicals. And behind them came a long line of patrol officers and space criminals, including the struggling figure of Rockets himself, their weapons lifted skillfully by mechanical searchers, long accustomed to removing valuables and dangerous objects from purses, and those traditional hiding places, feminine stockings.

Nearby, an aardvark, catching a glimpse of itself in a mirror in the guise of a Scotty, mooded unhappily.

Near Johnny a figure stirred and moaned. Johnny showed his teeth in what was half a grin. To the terrified Archie, it seemed like a ferocious sign of an insatiable appetite for double-crossers, and he cowered away.

"All right, Archie-boy," said Johnny gently. "I'm not going to bite—not yet, anyway. Give me the story."

Archie was in no mood to resist. He told what he knew.

"Fine," observed Johnny. "Do you know all the men in Rocket's gang?"

"Oh, no!"

"All the same, I think you can help us find the lad we want. Sit quietly while I draw up a little document, and then come with me."

By the time Johnny got there, Murchison and Vickers had already arrived in the mirror room. Behind them, other victims of the beauty method were being dumped upon completion of the treatment. Johnny took one look, and was embarrassed at the sight of what he himself had done. He turned his face away from the striped countenances of Murchison and Captain Vickers. At his side, Archie just gasped.

"Are you the one responsible for this?" demanded Vickers grimly. His hand moved twitchingly to the spot where he had kept his weapon.

"Had to do it," replied Johnny. "You had a traitor in your ranks. All right, Archie-boy, put your finger on him."

"I told you," began Archie, and at that moment a pretended patrolman dashed for the exit. Vickers stepped in his way, and as the man dodged, Johnny thrust out a casual foot. The man went headlong, scraping the floor with his face. As he lifted himself to a sitting position, an automatic adjuster began to touch up the stripes which the accident had smeared.

"Archie didn't know him, but the man

didn't realize that" Johnny told Vickers. "Can you handle him now?"

"I'll handle him," said Vickers, still grim. "And I'll handle you too."

"Later," returned Johnny. "For the moment, I leave you to your shame. You can remove those stripes and any other decorations you don't care for, and come to see me. I'll be waiting."

**I**T WAS no more than a half hour later that Murchison and Captain Vickers appeared in his office. Both were their usual selves, although Murchison had obviously lost weight, and Vickers was breathing hard, as if he had just gone through a grueling workout—or was preparing for one.

It was he who began the conversation. "What do you have to say for yourself before I tear you into shreds?" he demanded ominously.

Johnny was polite and casual. "In one word—photographs."

"Photographs?" repeated Murchison.

"Exactly. I got video views of what was happening to you. The more interesting ones I recorded for posterity.

Vickers turned pale and sat down. Murchison turned pale and sweated. He said, "What was the idea, Johnny? I never did anything to you!"

"Not much, you didn't."

"Anyway, Captain Vickers never did anything to you."

"I didn't like his manner, and I thought it could stand correcting. And I imagine it's being corrected right now." He said dreamily, "Can you imagine what some of our interplanetary circulation sheets would do with visions like those I snapped?"

"Why, Johnny? Why did you do it?"

"Blackmail, my fat friend and supposed superior."

"Are you blackmailing me too?" demanded Vickers.

"Indirectly. Directly, only this plump gentleman here. I hereby announce that if he doesn't take me off this job on which I have been stuck for what seems like a hundred revolutions of Pluto, I'll press the necessary button, and have those pictures shipped to people who will know how to use them."

"I'll take you off, Johnny," said Murchison, his lips compressing themselves into a thin line.

"You'll have to do more than that," Johnny said with a smile. "You'll have

to make me captain of a space freighter of a certain size and design, and guarantee to keep me there for a given period. It's just a question of making good on an old promise." He drew a set of papers from his desk.

"I've drawn up a contract. Captain Vickers can be full witness, and we can have a couple of video-witnesses in addition who will testify to the signing, but won't read the contract itself."

"Never!" shouted Murchison. "I won't let you get away with this!"

"You won't mind your pictures being broadcast through the system? I have some beauties. They'll get complete circulation. You won't have a satellite left to hide on."

"Publish and be blasted from here to Sirius!"

"I was afraid that might be your attitude," said Johnny regretfully. "That leaves me one recourse. Indirect blackmail of Captain Vickers."

"What am I supposed to do?" demanded the grim Captain.

"You are supposed to persuade Mr Murchison to sign. If you do, you get your pictures. If you don't—well, that will be unfortunate."

He could see the wheels going round in the Captain's head.

"Don't get any ideas, Captain. I have you covered now by a couple of robots. Make a wrong move, and those pictures go out by automatic sender. But persuade Murchison, and you get them back."

"How am I going to persuade him?"

"That, Captain, I leave up to you. How do you persuade a space-crook to confess?"

An even grimmer than usual Vickers turned his face toward Murchison. He had his strength back now. "Come along, fellow. You and I have a few things to talk over."

"Wait a minute!"

"Come along, I said." Vickers' hand seized the fat man's collar.

"Let go of me—I'll sign." The chins quivered, then firmed. "May every curse

in the system fall upon you, Johnny, for this! May the plagues of Pluto get you!"

"Forget the dramatic despair," said Johnny. "Just sign. And by the way I want it understood—no reprisals."

"What?" exclaimed Vickers.

"No reprisals," insisted Johnny. "I want your word as an officer of the space patrol."

The thought of reprisals had evidently been not too far back in the Captain's mind, and it was a heavy blow to give them up, but finally he promised. He was silent as he witnessed Murchison's signature.

"As for Archie," said Johnny, "I pity the poor idiot. I think a lecture from a judge should convince him that crime doesn't pay. Give him my old job, Murchison. And ship those aardvarks back to Venus. I've got them in a chilled room, but they're buddin' anyway. If they increase too much, you'll be held responsible."

"Never mind the free advice," snarled Vickers. "Where are those photographs?"

"I hadn't realized you were so anxious to see them," said Johnny. He waved an arm, and a cupboard slid open. Both men were in such a hurry that they got in each other's way, and each guarded his own photographs as if they were priceless secrets. "Beautiful, aren't they?" observed Johnny, genial as ever.

If Vickers had turned pale before, this time the colors of the rainbow chased each other across his face. Red, green, yellow, and purple were there in turn. Then a flame shot up, and consumed the photographs. Murchison was not far behind. In fact, he used the same ancient match.

"Too bad," said Johnny, dreaming of the space freighter that was to be his. He moved to the side of the room. "I'm disappointed in you two."

"Disappointed?" repeated Murchison.

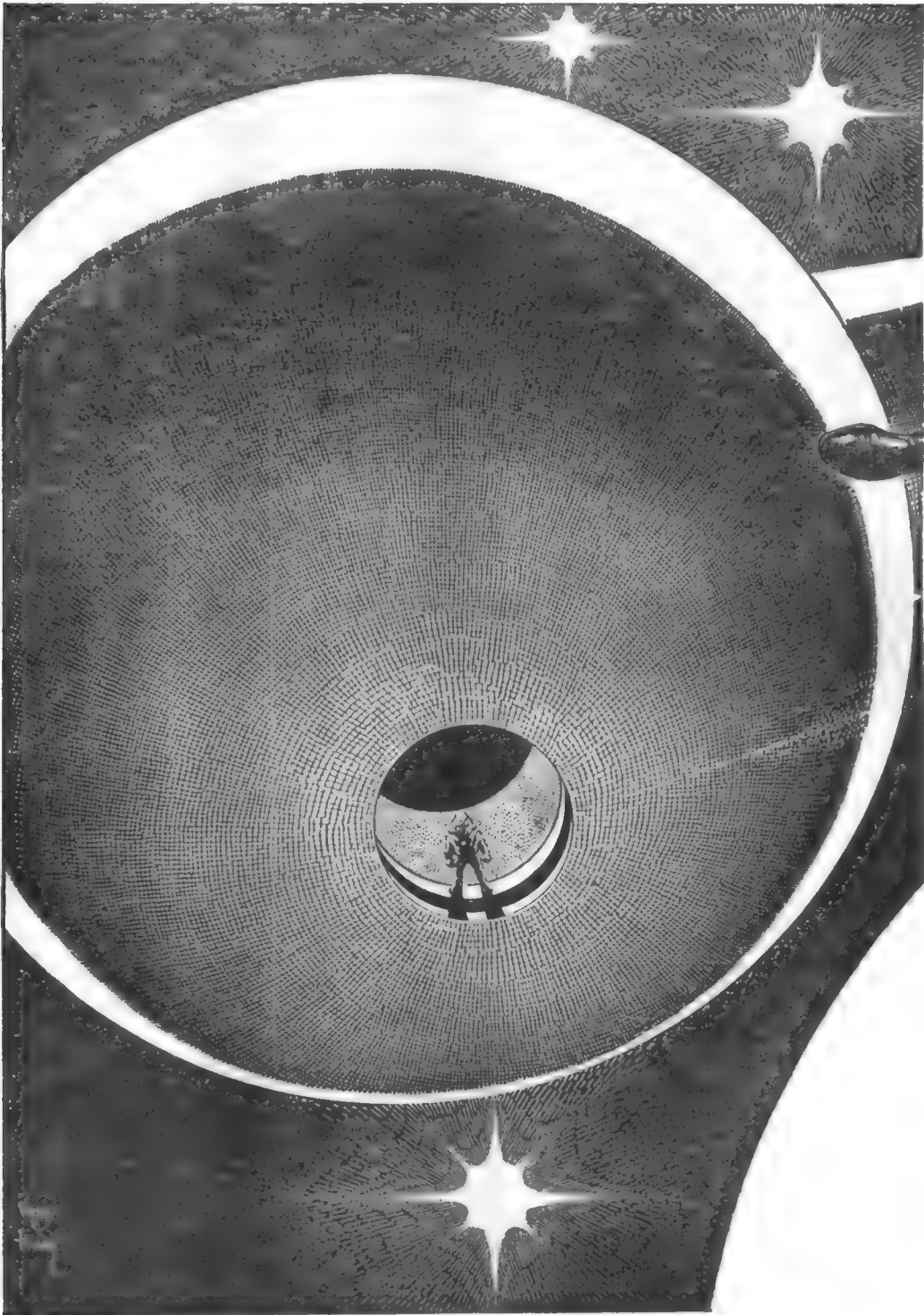
"I was hoping you'd let me have a set to hang on the walls of my cabin in that freighter. Autographed!" he added hurriedly, and ducked outside.

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# THE DANCING GIRL OF GANYMEDE

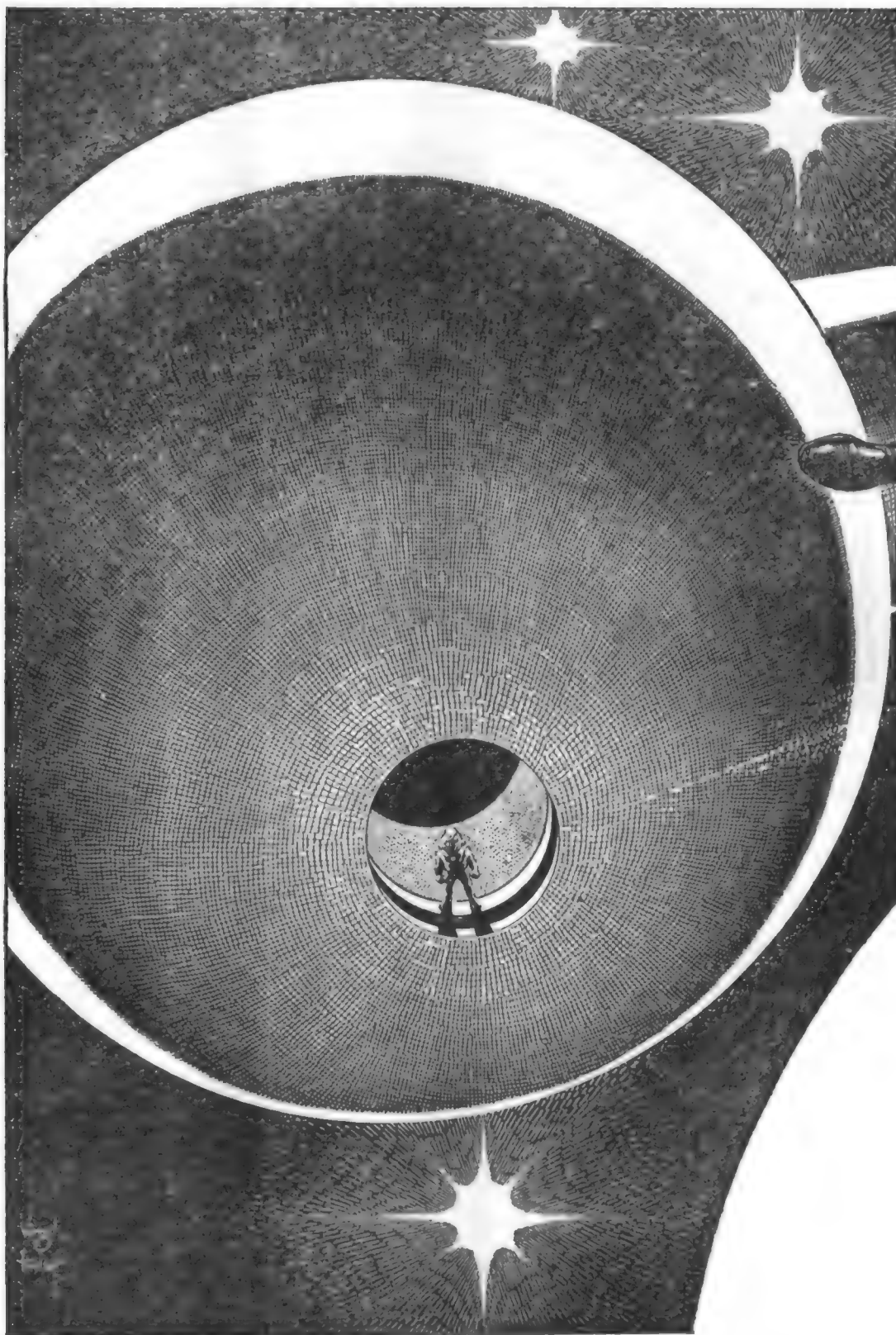
A Novelet of Fantasy and Romance by LEIGH BRACKETT

**Two Men on a Damaged Space Ship With Only Enough**





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**Air for One—and Somehow, a Choice Must be Made!**



# Thirty Seconds— Thirty Days

a novelet by **ARTHUR C. CLARKE**

## CHAPTER I

### *Holed in Space*

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other man aboard the ship. But when nothing happened and when McNeil neither spoke nor came into the room the long silence finally roused Grant's curiosity and he swung the seat round in its gimbals.

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way, looking as if he had seen a ghost. The trite metaphor flashed into Grant's mind instantly. He did not know for a moment how near the truth it was. In a sense McNeil *had* seen a ghost—the most terrifying of all ghosts—his own.

"What's the matter?" said Grant angrily. "You sick or something?"

The engineer shook his head. Grant noticed the little beads of sweat that broke away from his forehead and went glittering across the room on their perfectly straight trajectories. His throat muscles moved but for awhile no sound came. It looked as if he were going to cry.

"We're done for," he whispered at last. "Oxygen reserve's gone."

Then he did cry. He looked like a flabby doll, slowly collapsing on itself. He couldn't fall for there was no gravity, so he just folded up in mid-air.

Grant said nothing. Quite unconsciously he rammed his smouldering cigaret into the ash-tray, grinding it viciously until the last tiny spark had died. Already the air seemed to be thickening around him as the oldest terror of the spaceways gripped him by the throat.

He slowly loosed the elastic straps, which, while he was seated, gave some illusion of weight and with an automatic skill launched himself towards the doorway. McNeil did not offer to follow. Even making every allowance for the shock he had undergone Grant felt that he was behaving very badly. He gave the engineer an angry cuff as he passed and told him to snap out of it.

The hold was a large hemispherical room with a thick central column which carried the controls and cabling to the other half of the dumbbell-shaped spaceship a hundred meters away. It was packed with crates and boxes arranged in a surrealistic three-dimensional array that made very few concessions to gravity.

But even if the cargo had suddenly vanished Grant would scarcely have noticed. He had eyes only for the big oxygen tank, taller than himself, which was bolted against the wall near the inner door of the airlock.

It was just as he had last seen it, gleaming with aluminium paint, and the metal sides still held the faint touch of coldness that gave the only hint of their contents. All the piping seemed in

perfect condition. There was no sign of anything wrong apart from one minor detail. The needle of the contents gauge lay mutely against the zero stop.

Grant gazed at that silent symbol as a man in ancient London, returning home one evening at the time of the Plague might have stared at a rough cross newly scrawled upon his door. Then he banged half a dozen times on the glass in the futile hope that the needle had stuck—though he never really doubted its message. News that is sufficiently bad somehow carries its own guarantee of truth. Only good reports need confirmation.

**W**HEN Grant got back to the control room McNeil was himself again. A glance at the opened medicine chest showed the reason for the engineer's rapid recovery. He even assayed a faint attempt at humor.

"It was a meteor," he said. "They tell us a ship this size should get hit once a century. We seemed to have jumped the gun with ninety-five years still to go."

"But what about the alarms? The air pressure's normal—how could we have been holed?"

"We weren't," McNeil replied. "You know how the oxygen circulates night-side through the refrigerating coils to keep it liquid? The meteor must have smashed them and the stuff simply boiled away."

Grant was silent, collecting his thoughts. What had happened was serious—deadly serious—but it need not be fatal. After all the voyage was more than three-quarters over.

"Surely the regenerator can keep the air breathable, even if it does get pretty thick?" he asked hopefully.

McNeil shook his head. "I've not worked it out in detail, but I know the answer. When the carbon dioxide is broken down and the free oxygen gets cycled back there's a loss of about ten percent. That's why we have to carry a reserve."

"The spacesuits!" cried Grant in sudden excitement. "What about their tanks?"

He had spoken without thinking and the immediate realization of his mistake left him feeling worse than before.

"We can't keep oxygen in them—it would boil off in a few days. There's

enough compressed gas there for about thirty minutes—merely long enough for you to get to the main tank in an emergency."

"There must be a way out—even if we have to jettison cargo and run for it. Let's stop guessing and work out exactly where we are."

Grant was as much angry as frightened. He was angry with McNeil for breaking down. He was angry with the designers of the ship for not having foreseen this God-knew-how-many-million-to-one chance. The deadline might be a couple of weeks away and a lot could happen before then. The thought helped for a moment to keep his fears at arm's length.

This was an emergency beyond a doubt but it was one of those peculiarly protracted emergencies that seem to happen only in space. There was plenty of time to think—perhaps too much time.

Grant strapped himself in the pilot's seat and pulled out a writing pad.

"Let's get the facts right," he said with artificial calmness. "We've got the air that's still circulating in the ship and we lose ten percent of the oxygen every time it goes through the regenerator. Chuck me over the Manual, will you? I can never remember how many cubic meters we use a day."

In saying that the *Star Queen* might expect to be hit by a meteor once every century McNeil had grossly but unavoidably oversimplified the problem. For the answer depends on so many factors that three generations of statisticians had done little but lay down rules so vague that the insurance companies still shivered with apprehension when the great meteor showers went sweeping like a gale through the orbits of the inner worlds.

Everything depends, of course, on what one means by the word meteor. Each lump of cosmic slag that reaches the surface of the Earth has a million smaller brethren who perish utterly in the no-man's-land where the atmosphere has not quite ended and space has yet to begin—that ghostly region where the weird Aurora sometimes walks by night.

These are the familiar shooting stars, seldom larger than a pin's head, and these in turn are outnumbered a millionfold again by particles too small to leave any visible trace of their dying

as they drift down from the sky. All of them, the countless specks of dust, the rare boulders and even the wandering mountains that Earth encounters perhaps once every million years—all of them are meteors.

**F**OR the purposes of space-flight, a meteor is only of interest if, on penetrating the hull of a ship, it leaves a hole large enough to be dangerous. This is a matter of relative speeds as well as size. Tables have been prepared showing approximate collision times for various parts of the Solar System—and for various sizes of meteors down to masses of a few milligrams.

That which had struck the *Star Queen* was a giant, being nearly a centimeter across and weighing all of ten grams. According to the tables the waiting time for collision with such a monster was of the order of ten to the ninth days—say three million years. The virtual certainty that such an occurrence would not happen again in the course of human history gave Grant and McNeil very little consolation.

However, things might have been worse. The *Star Queen* was 115 days on her orbit and had only 30 still to go. She was traveling, as did all freighters, on the long tangential ellipse kissing the orbits of Earth and Venus on opposite sides of the Sun. The fast liners could cut across from planet to planet at three times her speed—and ten times her fuel consumption—but she must plod along her predetermined track like a streetcar taking 145 days, more or less, for each journey.

Anything more unlike the early-twentieth-century idea of a spaceship than the *Star Queen* would be hard to imagine. She consisted of two spheres, one fifty and the other twenty meters in diameter, joined by a cylinder about a hundred meters long. The whole structure looked like a match-stick-and-plasticene model of a hydrogen atom. Crew, cargo and controls were in the larger sphere, while the smaller one held the atomic motors and was—to put it mildly—out of bounds to living matter.

The *Star Queen* had been built in space and could never have lifted herself even from the surface of the Moon. Under full power her iron drive could produce an acceleration of a twentieth of a gravity, which in an hour would



give her all the velocity she needed to change for a satellite of the Earth to one of Venus.

Hauling cargo up from the planets was the job of the powerful little chemical rockets. In a month the tugs would be climbing up from Venus to meet her but the *Star Queen* would not be stopping for there would be no one at the controls. She would continue blindly on her orbit, speeding past Venus at miles a second—and five months later she would be back at the orbit of the Earth though Earth itself would then be far away.

## CHAPTER II

### *Funeral Oration*

**I**T is surprising how long it takes to do a simple addition when your life depends on the answer. Grant ran down the short column of figures half a dozen times before he finally gave up hope that the total would change. Then he sat doodling nervously on the white plastic of the pilot's desk.

"With all possible economies," he said, "we can last about twenty days. That means we'll be ten days out of Venus when . . ." His voice trailed off into silence.

Ten days didn't sound like much—but it might just as well have been ten years. Grant thought sardonically of all the hack adventure writers who had used just this situation in their stories and radio serials. In these circumstances, according to the carbon copy experts—few of whom, had ever gone beyond the Moon—there were three things that could happen.

The popular solution—which had become almost a cliché—was to turn the ship into a glorified greenhouse or a hydroponic farm and let photosynthesis do the rest. Alternatively one could perform prodigies of chemical or atomic engineering—explained in tedious technical detail—and build an oxygen manufacturing plant which would not only save your life—and of course the heroine's—but would also make you the owner of fabulously valuable patents. The third or *deus ex machina* solution was the arrival of a convenient space-

ship which happened to be matching your course and velocity exactly.

But that was fiction and things were different in real life. Although the first idea was sound in theory there wasn't even a packet of grass-seed aboard the *Star Queen*. As for feats of inventive engineering, two men—however brilliant and however desperate—were not likely to improve in a few days on the work of scores of great industrial research organizations over a full century.

The spaceship that "happened to be passing" was, almost by definition, impossible. Even if other freighters had been coasting on the same elliptic path—and Grant knew there were none—then by the very laws that governed their movements they would always keep their original separations. It was not quite impossible that a liner, racing on its hyperbolic orbit, might pass within a few hundred thousand kilometers of them—but at a speed so great that it would be as inaccessible as Pluto.

"If we threw out the cargo," said McNeil at last, "would we have a chance of changing our orbit?"

Grant shook his head.

"I'd hoped so," he replied, "but it won't work. We could reach Venus in a week if we wished—but we'd have no fuel for braking and nothing from the planet could catch us as we went past."

"Not even a liner?"

"According to *Lloyd's Register* Venus has only a couple of freighters at the moment. In any case it would be a practically impossible maneuver. Even if it could match our speed how would the rescue ship get back? It would need about fifty kilometers a second for the whole job!"

"If we can't figure a way out," said McNeil, "maybe someone on Venus can. We'd better talk to them."

"I'm going to," Grant replied, "as soon as I've decided what to say. Go and get the transmitter aligned, will you?"

He watched McNeil as he floated out of the room. The engineer was probably going to give trouble in the days that lay ahead. Until now they had got on well enough—like most stout men, McNeil was good-natured and easy-going. But now Grant realized that he lacked fibre. He had become too flabby—physically and mentally—through living too long in space.

A BUZZER sounded on the transmitter switchboard. The parabolic mirror out on the hull was aimed at the gleaming arc-lamp of Venus, only ten million kilometers away and moving on an almost parallel path. The three-millimeter waves from the ship's transmitter would make the trip in little more than half a minute. There was bitterness in the knowledge that they were only thirty seconds from safety.

The automatic monitor on Venus gave its impersonal *Go ahead* signal and Grant began to talk steadily, and he hoped, quite dispassionately. He gave a careful analysis of the situation and ended with a request for advice. His fears concerning McNeil he left unspoken. For one thing he knew that the engineer would be monitoring him at the transmitter.

As yet no one on Venus would have heard the message, even though the transmission time-lag was over. It would still be coiled up in the recorder spools but in a few minutes an unsuspecting signal officer would arrive to play it over.

He would have no idea of the bomb shell that was about to burst, triggering trains of sympathetic ripples on all the inhabited worlds as television and news-sheet took up the refrain. An accident in space has a dramatic quality that crowds all other items from the headlines.

Until now Grant had been too pre-occupied with his own safety to give much thought to the cargo in his charge. A sea-captain of ancient times, whose first thought was for his ship, might have been shocked by this attitude. Grant, however, had reason on his side.

The *Star Queen* could never flounder, could never run upon uncharted rocks or pass silently, as so many ships have passed, forever from the knowledge of man. She was safe, whatever might befall her crew. If she was undisturbed she would continue to retrace her orbit with such precision that men might set their calendars by her for centuries to come.

The cargo, Grant suddenly remembered, was insured for over twenty million dollars. There were not many goods valuable enough to be shipped from world to world and most of the crates in the hold were worth more than their weight—or rather their mass—in gold.

Perhaps some items might be useful in this emergency and Grant went to the safe to find the loading schedule.

He was sorting the thin tough sheets when McNeil came back into the cabin.

"I've been reducing the air pressure," he said. "The hull shows some leaks that wouldn't have mattered in the usual way."

Grant nodded absently as he passed a bundle of sheets over to McNeil.

"Here's our loading schedule. I suggest we both run through it in case there's anything in the cargo that may help."

If it did nothing else, he might have added, it would at least give them something to occupy their minds.

As he ran down the long columns of numbered items—a complete cross-section of interplanetary commerce—Grant found himself wondering what lay behind these inanimate symbols. "*Item 347—1 book—4 kilos gross.*"

He whistled as he noticed that it was a starred item, insured for a hundred thousand dollars and he suddenly remembered hearing on the radio that the Hesperian Museum had just bought a first edition "*Seven Pillars of Wisdom.*"

A few sheets later was a very contrasting item, *Miscellaneous books—25 kilos—no intrinsic value.*

It had cost a small fortune to ship those books to Venus, yet they were of "no intrinsic value." Grant let his imagination loose on the problem. Perhaps someone who was leaving Earth forever was taking with him to a new world his most cherished treasures—the dozen or so volumes that above all others had most shaped his mind.

*Item 564—12 reels film.*

That, of course, would be the Neronian super-epic, *While Rome Burns*, which had left Earth just one jump ahead of the censor. Venus was waiting for it with considerable impatience.

*Medical supplies—50 kilos. Case of cigars—1 kilo. Precision instruments—75 kilos.* So the list went on. Each item was something rare or something which the industry and science of a younger civilization could not yet produce.

The cargo was sharply divided into two classes—blatant luxury or sheer necessity. There was little in between. And there was nothing, nothing at all, which gave Grant the slightest hope. He did not see how it could have been other-

wise but that did not prevent him from feeling a quite unreasonable disappointment.

The reply from Venus, when it came at last, took nearly an hour to run through the recorder. It was a questionnaire so detailed that Grant wondered morosely if he'd live long enough to answer it. Most of the queries were technical ones concerning the ship. The experts on two planets were pooling their brains in the attempt to save the *Star Queen* and her cargo.

"Well, what do you think of it?" Grant asked McNeil when the other had finished running through the message. He was watching the engineer carefully for any further sign of strain.

**T**HERE was a long pause before McNeil spoke. Then he shrugged his shoulders and his first words were an echo of Grant's own thoughts.

"It will certainly keep us busy. I won't be able to do all these tests in under a day. I can see what they're driving at most of the time but some of the questions are just crazy."

Grant had suspected that, but said nothing as the other continued.

"Rate of hull leakage—that's sensible enough, but why should anyone want to know the efficiency of our radiation screening? I think they're trying to keep our morale up by pretending they have some bright ideas—or else they want to keep us too busy to worry."

Grant was relieved and yet annoyed by McNeil's calmness—relieved because he had been afraid of another scene and annoyed because McNeil was not fitting at all neatly into the mental category he had prepared for him. Was that first momentary lapse typical of the man or might it have happened to anyone?

Grant, to whom the world was very much a place for blacks and whites, felt angry at being unable to decide whether McNeil was cowardly or courageous. That he might be both was a possibility that never occurred to him.

There is a timelessness about space-flight that is unmatched by any other experience of man. Even on the Moon there are shadows that creep sluggishly from crag to crag as the sun makes his slow march across the sky. Earthside there is always the great clock of the spinning globe, marking the hours with

continents for hands. But on a long voyage in a gyro-stabilized ship the same patterns of sunlight lie unmoving on wall or floor as the chronometer ticks off its meaningless hours and days.

Grant and McNeil had long since learned to regulate their lives accordingly. In deep space they moved and thought with a leisureliness that would vanish quickly enough when a voyage was nearing its end and the time for braking maneuvers had arrived. Though they were now under sentence of death, they continued along the well-worn grooves of habit.

Every day Grant carefully wrote up the log, checked the ship's position and carried out his various routine duties. McNeil was also behaving normally as far as could be told, though Grant suspected that some of the technical maintenance was being carried out with a very light hand.

It was now three days since the meteor had struck. For the last twenty-four hours Earth and Venus had been in conference and Grant wondered when he would hear the result of their deliberations. He did not believe that even the finest technical brains in the Solar System could save them now but it was hard to abandon hope when everything still seemed so normal and the air was still clean and fresh.

On the fourth day Venus spoke again. Shorn of its technicalities, the message was nothing more or less than a funeral oration. Grant and McNeil had been written off but they were given elaborate instructions concerning the safety of the cargo.

Back on Earth the astronomers were computing all the possible rescue orbits that might make contact with the *Star Queen* in the next few years. There was even a chance that she might be reached from Earth six or seven months later, when she was back at aphelion but the maneuver could only be carried out by a fast liner with no payload and would cost a fortune in fuel.

**M**CNEIL vanished soon after this message came through. At first Grant was a little relieved. If McNeil chose to look after himself that was his own affair. Besides there were various letters to write—though the last-will-and-testament business could come later.

It was McNeil's turn to prepare the

"evening" meal, a duty he enjoyed for he took good care of his stomach. When the usual sounds from the galley were not forthcoming Grant went in search of his crew.

He found McNeil lying in his bunk, very much at peace with the universe. Hanging in the air beside him was a large metal crate which had been roughly forced open. Grant had no need to examine it closely to guess its contents. A glance at McNeil was enough.

"It's a dirty shame," said the engineer without a trace of embarrassment, "to suck this stuff up through a tube. Can't you put on some 'g' so that we can drink it properly?"

Grant stared at him with angry contempt but McNeil returned his gaze unabashed.

"Oh, don't be a sourpuss! Have some yourself—what does it matter now?"

He pushed across a bottle and Grant fielded it deftly as it floated by. It was a fabulously valuable wine—he remembered the consignment now—and the contents of that small crate must be worth thousands.

"I don't think there's any need," said Grant severely, "to behave like a pig—even in these circumstances."

McNeil wasn't drunk yet. He had only reached the brightly-lit anteroom of intoxication and had not lost all contact with the drab outer world.

"I am prepared," he said with great solemnity, "to listen to any good argument against my present course of action—a course which seems eminently sensible to me. But you'd better convince me quickly while I'm still amenable to reason."

He pressed the plastic bulb again and a purple jet shot into his mouth.

"Apart from the fact that you're stealing Company property which will certainly be salvaged sooner or later—you can hardly stay drunk for several weeks."

"That," said McNeil thoughtfully, "remains to be seen."

"I don't think so," retorted Grant. Bracing himself against the wall he gave the crate a vicious shove that sent it flying through the open doorway.

As he dived after it and slammed the door he heard McNeil shout, "Well, of all the dirty tricks!"

It would take the engineer some time—particularly in his present condition—

to unbuckle himself and follow. Grant steered the crate back to the hold and locked the door. As there was never any need to lock the hold when the ship was in space McNeil wouldn't have a key for it himself and Grant could hide the duplicate that was kept in the control cabin.

McNeil was singing when, some time later, Grant went back past his room. He still had a couple of bottles for company and was shouting—

"We don't care *where* the oxygen goes

"If it doesn't get into the wine . . ."

Grant, whose education had been severely technical, couldn't place the quotation. As he paused to listen he suddenly found himself shaken by an emotion which, to do him justice, he did not for a moment recognize.

It passed as swiftly as it had come, leaving him sick and trembling. For the first time, he realized that his dislike of McNeil was slowly turning to hatred.

## CHAPTER III

### *Tensions Building*

**I**T is a fundamental rule of space-flight that, for sound psychological reasons, the minimum crew on a long journey shall consist of not less than three men. But rules are made to be broken and the *Star Queen's* owners had obtained full authority from the Board of Space Control and the insurance companies when the freighter set off for Venus without her regular captain.

At the last moment he had been taken ill and there was no replacement. Since the planets are disinclined to wait upon man and his affairs, if she did not sail on time she would not sail at all.

Millions of dollars were involved—so she sailed. Grant and McNeil were both highly capable men and they had no objection at all to earning double their normal pay for very little extra work. Despite fundamental differences in temperament, they got on well enough in ordinary circumstances. It was nobody's fault that circumstances were now very far from ordinary.

Three days without food, it is said, is long enough to remove most of the



subtle differences between a civilized man and a savage. Grant and McNeil were still in no physical discomfort. But their imaginations had been only too active and they now had more in common with two hungry Pacific Islanders in a lost canoe than either would have cared to admit.

For there was one aspect of the situation, and that the most important of all, which had never been mentioned. When the last figures on Grant's writing-pad had been checked and rechecked the calculation was still not quite complete. Instantly each man had made the one further step, each had arrived simultaneously at the same unspoken result.

It was terribly simple—a macabre parody of those problems in first-year arithmetic that begin, "If six men take two days to assemble five helicopters, how long . . ."

The oxygen would last *two* men for about twenty days and Venus was thirty days away. One did not have to be a calculating prodigy to see at once that one man and one man only might yet live to walk the metal streets of Port Hesperus.

The acknowledged deadline was twenty days ahead but the unmentioned one was only ten days off. Until that time there would still be enough air for two men—and thereafter for one man only for the rest of the voyage. To a sufficiently detached observer the situation would have been very entertaining.

It was obvious that the conspiracy of silence could not last much longer. But it is not easy, even at the best of times, for two people to decide amicably which one of them shall commit suicide. It is still more difficult when they are no longer on speaking terms.

Grant wished to be perfectly fair. Therefore the only thing to do was to wait until McNeil sobered up and then to put the question to him frankly. He could think best at his desk, so he went to the control cabin and strapped himself down in the pilot's chair.

For awhile he stared thoughtfully into nothingness. It would be better, he decided, to broach the matter by correspondence, especially while diplomatic relations were in their present state. He clipped a sheet of note-paper on the writing pad and began, "Dear

McNeil . . ." Then he tore it out and started again, "McNeil . . ."

It took him the best part of three hours and even then he wasn't wholly satisfied. There were some things it was so darned difficult to put down on paper. But at last he managed to finish. He sealed the letter and locked it away in his safe. It could wait for a day or two.

**F**EW of the writing millions on Earth and Venus could have had any idea of the tensions that were slowly building up aboard the *Star Queen*. For days press and radio had been full of fantastic rescue schemes. On three worlds there was hardly any other topic of conversation. But only the faintest echo of the planetwide tumult reached the two men who were its cause.

At any time the station on Venus could speak to the *Star Queen* but there was so little that could be said. One could not with any decency give words of encouragement to men in the condemned cell, even when there was some slight uncertainty about the actual date of execution.

So Venus contented itself with a few routine messages every day and blocked the steady stream of exhortations and newspaper offers that came pouring in from Earth. As a result private radio companies on Earth made frantic attempts to contact the *Star Queen* directly. They failed, simply because it never occurred to Grant and McNeil to focus their receiver anywhere except on Venus, now so tantalizingly near at hand.

There had been an embarrassing interlude when McNeil emerged from his cabin but though relations were not particularly cordial, life aboard the *Star Queen* continued much as before.

Grant spent most of his waking hours in the pilot's position, calculating approach maneuvers and writing interminable letters to his wife. He could have spoken to her had he wished but the thought of all those millions of waiting ears had prevented him from doing so. Interplanetary speech circuits were supposed to be private—but too many people would be interested in this **one**.

In a couple of days, Grant assured himself, he would hand his letter to McNeil and they could decide what was

to be done. Such a delay would also give McNeil a chance of raising the subject himself. That he might have other reasons for his hesitation was something Grant's conscious mind still refused to admit.

He often wondered how McNeil was spending his time. The engineer had a large library of microfilm books for he read widely and his range of interests was unusual. His favorite book, Grant knew, was *Jurgen* and perhaps even now he was trying to forget his doom by losing himself in its strange magic. Others of McNeil's books were less respectable and not a few were of the class curiously described as *curiosa*.

The truth of the matter was that McNeil was far too subtle and complicated a personality for Grant to understand. He was a hedonist and enjoyed the pleasures of life all the more for being cut off from them for months at a time. But he was by no means the moral weakling that the unimaginative and somewhat puritanical Grant had supposed.

It was true that he had collapsed completely under the initial shock and that his behaviour over the wine was—by Grant's standards—reprehensible. But McNeil had had his breakdown and had recovered. Therein lay the difference between him and the hard but brittle Grant.

Though the normal routine of duties had been resumed by tacit consent it did little to reduce the sense of strain. Grant and McNeil avoided each other as far as possible except when mealtimes brought them together. When they did meet they behaved with an exaggerated politeness as if each were striving to be perfectly normal—and inexplicably failing.

Grant had hoped that McNeil would himself broach the subject of suicide, thus sparing him a very awkward duty. When the engineer stubbornly refused to do anything of the sort it added to Grant's resentment and contempt. To make matters worse he was now suffering from nightmares and sleeping very badly.

The nightmare was always the same. When he was a child it had often happened that at bedtime he had been reading a story far too exciting to be left until morning. To avoid detection he had continued reading under the

bedclothes by flashlight, curled up in a snug white-walled cocoon. Every ten minutes or so the air had become too stifling to breathe and his emergence into the delicious cool air had been a major part of the fun.

Now, thirty years later, these innocent childhood hours returned to haunt him. He was dreaming that he could not escape from the suffocating sheets while the air was steadily and remorselessly thickening around him.

He had intended to give McNeil the letter after two days, yet somehow he put it off again. This procrastination was very unlike Grant but he managed to persuade himself that it was a perfectly reasonable thing to do.

He was giving McNeil a chance to redeem himself—to prove that he wasn't a coward by raising the matter himself. That McNeil might be waiting for him to do exactly the same thing somehow never occurred to Grant.

The all-too-literal deadline was only five days off when, for the first time, Grant's mind brushed lightly against the thought of murder. He had been sitting after the "evening" meal, trying to relax as McNeil clattered around in the galley with, he considered, quite unnecessary noise.

What use, he asked himself, was the engineer to the world? He had no responsibilities and no family—no one would be any the worse off for his death. Grant, on the other hand, had a wife and three children of whom he was moderately fond, though for some obscure reason they responded with little more than dutiful affection.

ANY impartial judge would have no difficulty in deciding which of them should survive. If McNeil had a spark of decency in him he would have come to the same conclusion already. Since he appeared to have done nothing of the sort he had forfeited all further claims to consideration.

Such was the elemental logic of Grant's subconscious mind, which had arrived at its answer days before but had only now succeeded in attracting the attention for which it had been clamoring. To Grant's credit he at once rejected the thought with horror.

He was an upright and honorable person with a very strict code of behaviour. Even the vagrant homicidal

impulse of what is misleadingly called "normal" man had seldom ruffled his mind. But in the days—the very few days—left to him, they would come more and more often.

The air had now become noticeably fouler. Though there was still no real difficulty in breathing it was a constant reminder of what lay ahead and Grant found that it was keeping him from sleep. This was not pure loss, as it helped to break the power of his nightmares, but he was becoming physically run down.

His nerve was also rapidly deteriorating, a state of affairs accentuated by the fact that McNeil seemed to be behaving with unexpected and annoying calmness. Grant realized that he had come to the stage when it would be dangerous to delay the showdown any longer.

McNeil was in his room as usual when Grant went up to the control cabin to collect the letter he had locked away in the safe—what seemed a lifetime ago. He wondered if he need add anything more to it. Then he realized that this was only another excuse for delay. Resolutely he made his way towards McNeil's cabin.

A single neutron begins the chain-reaction that in an instant can destroy a million lives and the toil of generations. Equally insignificant and unimportant are the trigger-events which can sometimes change a man's course of action and so alter the whole pattern of his future.

Nothing could have been more trivial than that which made Grant pause in the corridor outside McNeil's room. In the ordinary way he would not even have noticed it. It was the smell of smoke—tobacco smoke.

The thought that the sybaritic engineer had so little self-control that he was squandering the last precious liters of oxygen in such a manner filled Grant with blinding fury. He stood for a moment quite paralyzed with the intensity of his emotion.

Then slowly, he crumbled the letter in his hand. The thought which had first been an unwelcomed intruder, then a casual speculation, was at last fully accepted. McNeil had had his chance and had proved, by his unbelievable selfishness, unworthy of it. Very well—he could die.

The speed with which Grant had arrived at this conclusion would not have deceived the most amateurish of psychologists. It was relief as much as hatred that drove him away from McNeil's room. He had wanted to convince himself that there would be no need to do the honorable thing, to suggest some game of chance that would give them each an equal probability of life.

This was the excuse he needed and he had seized upon it to salve his conscience. For though he might plan and even carry out a murder Grant was the sort of person who would have to do it according to his own peculiar moral code.

As it happened he was—not for the first time—badly misjudging McNeil. The engineer was a heavy smoker and tobacco was quite essential to his mental well-being even in normal circumstances. How much more essential it was now Grant, who only smoked occasionally and without much enjoyment, could never have appreciated.

McNeil had satisfied himself by careful calculation that four cigarettes a day would make no measurable difference whatsoever to the ship's oxygen endurance, whereas they would make all the difference in the world to his own nerves and hence indirectly to Grant's.

But it was no use explaining this to Grant. So he had smoked in private and with a self-control he found agreeably, almost voluptuously, surprising. It was sheer bad luck that Grant had detected one of the day's four cigarettes.

For a man who had only at that moment talked himself into murder Grant's actions were remarkably methodical. Without hesitation, he hurried back to the control room and opened the medicine chest with its neatly labeled compartments, designed for almost every emergency that could occur in space.

Even the ultimate emergency had been considered, for there behind its retaining elastic bands was the tiny bottle he had been seeking, the image of which through all these days had been lying hidden far down in the unknown depths of his mind. It bore a white label carrying a skull-and-crossbones, and beneath them the words—*Approx. one-half gram will cause painless and almost instantaneous death.*

The poison was painless and instant-

neous—that was good. But even more important was a fact unmentioned on the label. It was also tasteless.

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## CHAPTER IV

### *The Stars Look Down*

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THE contrast between the meals prepared by Grant and those organized with considerable skill and care by McNeil was striking. Anyone who was fond of food and who spent a good deal of his life in space usually learned the art of cooking in self-defense. McNeil had done this long ago.

To Grant on the other hand eating was one of those necessary but annoying jobs which had to be got through as quickly as possible. His cooking reflected this opinion. McNeil had ceased to grumble about it but he would have been very interested in the trouble Grant was taking over this particular meal.

If he noticed any increasing nervousness on Grant's part as the meal progressed he said nothing. They ate almost in silence but that was not unusual for they had long since exhausted most of the possibilities of light conversation. When the last dishes—deep bowls with inturned rims to prevent the contents drifting out—had been cleared away Grant went into the galley to prepare the coffee.

He took rather a long time for at the last moment something quite maddening and quite ridiculous happened. He suddenly recalled one of the film classics of the last century in which the fabulous Charlie Chaplin tried to poison an unwanted wife—and then accidentally changed the glasses.

No memory could have been more unwelcome for it left him shaken with a gust of silent hysteria. Poe's *Imp of the Perverse*, that demon who delights in defying the careful canons of self-preservation, was at work and it was a good minute before Grant could regain his self-control.

He was sure that outwardly at least he was quite calm as he carried in the two plastic containers and their drinking tubes. There was no danger of confusing them for the engineer's had the

letters MAC painted boldly across it.

At the thought Grant nearly relapsed into those psychopathic giggles again but just managed to regain control with the somber reflection that his nerves must be in even worse condition than he had imagined.

He watched, fascinated, though without appearing to do so, as McNeil toyed with his cup. The engineer seemed in no great hurry and was staring moodily into space. Then he put his lips to the drinking tube and sipped.

A moment later he spluttered slightly—and an icy hand seemed to seize Grant's heart and hold it tight. Then McNeil turned to him and said evenly, "You've made it properly for once. It's quite hot."

Slowly, Grant's heart resumed its interrupted work. He did not trust himself to speak but managed a noncommittal nod. McNeil parked the cup carefully in the air, a few inches away from his face.

He seemed very thoughtful as if weighing his words for some important remark. Grant cursed himself for having made the drink so hot—that was just the sort of detail that hanged murderers. If McNeil waited much longer he would probably betray himself through nervousness.

"I suppose," said McNeil in a quietly conversational sort of way, "it has occurred to you that there's still enough air to last one of us to Venus?"

Grant forced his jangling nerves under control and tore his eyes away from that hypnotic cup. His throat seemed very dry as he answered, "It—it had crossed my mind."

McNeil touched his cup, found it still too hot and continued thoughtfully, "Then wouldn't it be more sensible if one of us decided to walk out of the airlock, say—or to take some of the poison in there?" He jerked his thumb towards the medicine chest, just visible from where they were sitting.

Grant nodded.

"The only trouble, of course," added the engineer, "is to decide which of us will be the unlucky one. I suppose it would have to be by picking a card or in some other quite arbitrary way."

Grant stared at McNeil with a fascination that almost outweighed his mounting nervousness. He had never believed that the engineer could discuss



the subject so calmly. Grant was sure he suspected nothing. Obviously McNeil's thoughts had been running on parallel lines to his own and it was scarcely even a coincidence that he had chosen this time, of all times, to raise the matter.

McNeil was watching him intently as if judging his reactions.

"You're right," Grant heard himself say. "We must talk it over."

"Yes," said McNeil quite impassively. "We must." Then he reached for his cup again, put the drinking tube to his lips and sucked slowly.

Grant could not wait until he had finished. To his surprise the relief he had been expecting did not come. He even felt a stab of regret, though it was not quite remorse. It was a little late to think of it now but he suddenly remembered that he would be alone in the *Star Queen*, haunted by his thoughts, for more than three weeks before rescue came.

He did not wish to see McNeil die and he felt rather sick. Without another glance at his victim, he launched himself towards the exit.

**I**MMOVABLY fixed, the fierce sun and the unwinking stars looked down upon the *Star Queen*, which seemed as motionless as they. There was no way of telling that the tiny dumbbell of the ship had now almost reached her maximum speed and that millions of horsepower were chained within the smaller sphere, waiting for the moment of its release. There was no way of telling, indeed, that she carried any life at all.

An airlock on the night side of the ship slowly opened, letting a blaze of light escape from the interior. The brilliant circle looked very strange hanging there in the darkness. Then it was abruptly eclipsed as two figures floated out of the ship.

One was much bulkier than the other and for a rather important reason—it was wearing a space-suit. Now there are some forms of apparel that may be worn or discarded as the fancy pleases with no other ill-effects than a possible loss of social prestige. But space-suits are not among them.

Something not easy to follow was happening in the darkness. Then the smaller figure began to move, slowly at first but with rapidly mounting speed.

It swept out of the shadow of the ship into the full blast of the sun and now one could see that strapped to its back was a small gas-cylinder from which a fine mist was jetting to vanish almost instantly into space.

It was a crude but effective rocket. There was no danger that the ship's minute gravitational pull would drag the body back to it again.

Rotating slightly, the corpse dwindled against the stars and vanished from sight in less than a minute. Quite motionless the figure in the airlock watched it go. Then the outer door swung shut, the circle of brilliance vanished and only the pale Earthlight still glinted on the shadowed wall of the ship.

Nothing else whatsoever happened for twenty-three days.

The captain of the *Hercules* turned to his mate with a sigh of relief.

"I was afraid he couldn't do it. It must have been a colossal job to break his orbit single-handed—and with the air as thick as it must be by now. How soon can we get to him?"

"It will take about an hour. He's still got quite a bit of eccentricity but we can correct that."

"Good. Signal the *Leviathan* and *Titan* that we can make contact and ask them to take off, will you? But I wouldn't drop any tips to your news commentator friends until we're safely locked."

The mate had the grace to blush. "I don't intend to," he said in a slightly hurt voice as he pecked delicately at the keys of his calculator. The answer that flashed instantly on the screen seemed to displease him.

"We'd better board and bring the *Queen* down to circular speed ourselves before we call the other tugs," he said, "otherwise we'll all be wasting a lot of fuel. She's still got a velocity excess of nearly a kilometer a second."

"Good idea—tell *Leviathan* and *Titan* to stand by but not to blast until we give them the new orbit."

While the message was on its way down through the unbroken cloudbanks that covered half the sky below the mate remarked thoughtfully "I wonder what he's feeling like now?"

"I can tell you. He's so pleased to be alive that he doesn't give a hoot about anything else."

"Still I'm not sure I'd like to have left my shipmate in space so that I could get home."

"It's not the sort of thing that anyone would like to do. But you heard the broadcast—they'd talked it over calmly and the loser went out the airlock. It was the only sensible way."

"Sensible, perhaps—but it's pretty horrible to let someone else sacrifice himself in such a cold-blooded way so that you can live."

"Don't be a ruddy sentimentalist. I'll bet that if it happened to us you'd push me out before I could even say my prayers."

"Unless you did it to me first. Still, I don't think it's ever likely to happen to the *Hercules*. Five days out of port's the longest we've ever been, isn't it? Talk about the romance of the spaceways!"

The captain didn't reply. He was peering into the eyepiece of the navigating telescope, for the *Star Queen* should now be within optical range. There was a long pause while he adjusted the vernier controls. Then he gave a little sigh of satisfaction.

"There she is—about nine-fifty kilometers away. Tell the crew to stand by—and send a message to cheer him up. Say we'll be there in thirty minutes even if it isn't quite true."

**S**LOWLY the thousand-meter nylon ropes yielded beneath the strain as they absorbed the relative momentum of the ships, then slackened again as the *Star Queen* and the *Hercules* rebounded toward each other. The electric winches began to turn and, like a spider crawling up its thread, the *Hercules* drew alongside the freighter.

Men in spacesuits sweated with heavy reaction units—tricky work, this—until the airlocks had registered and could be coupled together. The outer doors slid aside and the air in the locks mingled, fresh with foul. As the mate of the *Hercules* waited, oxygen cylinder in hand, he wondered what condition the survivor would be in. Then the *Star Queen's* inner door slid open.

For a moment, the two men stood looking at each other across the short corridor that now connected the two airlocks. The mate was surprised and a little disappointed to find that he felt no particular sense of drama.

So much had happened to make this moment possible that its actual achievement was almost an anticlimax, even in the instant when it was slipping into the past. He wished—for he was an incurable romantic—that he could think of something memorable to say, some "Doctor Livingstone, I presume?" phrase that would pass into history.

But all he actually said was, "Well, McNeil, I'm pleased to see you."

Though he was considerably thinner and somewhat haggard McNeil had stood the ordeal well. He breathed gratefully the blast of raw oxygen and rejected the idea that he might like to lie down and sleep. As he explained he had done very little but sleep for the past week to conserve air. The first mate looked relieved. He had been afraid he might have to wait for the story.

The cargo was being transshipped and the other two tugs were climbing up from the great blinding crescent of Venus while McNeil retraced the events of the last few weeks and the mate made surreptitious notes.

He spoke quite calmly and impersonally, as if he were relating some adventure that had happened to another person, or indeed had never happened at all. Which was, of course, to some extent the case, though it would be unfair to suggest that McNeil was telling any lies.

He invented nothing but he omitted a good deal. He had had three weeks in which to prepare his narrative and he did not think it had any flaws.

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## CHAPTER V

### *In the Cards*

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**G**RANT had already reached the door when McNeil called softly after him, "What's the hurry? I thought we had something to discuss."

Grant grabbed at the doorway to halt his headlong flight. He turned slowly and stared unbelievably at the engineer. McNeil should be already dead—but he was sitting quite comfortably, looking at him with a most peculiar expression.

"Sit down," he said sharply—and in

that moment it suddenly seemed that all authority had passed to him. Grant did so, quite without volition. Something had gone wrong, though what it was he could not imagine.

The silence in the control room seemed to last for ages. Then McNeil said rather sadly, "I'd hoped better of you, Grant."

At last Grant found his voice though he could barely recognize it.

"What do you mean?" he whispered.

"What do you think I mean?" replied McNeil, with what seemed no more than mild irritation. "This little attempt of yours to poison me, of course."

Grant's tottering world collapsed at last but he no longer cared greatly one way or the other. McNeil began to examine his beautifully-kept finger nails with some attention.

"As a matter of interest," he said in the way that one might ask the time, "when did you decide to kill me?"

The sense of unreality was so overwhelming that Grant felt he was acting apart, that this had nothing to do with real life at all.

"Only this morning," he said and believed it.

"Hmm," remarked McNeil, obviously without much conviction. He rose to his feet and moved over to the medicine chest. Grant's eyes followed him as he fumbled in the compartment and came back with the little poison bottle. It still appeared to be full. Grant had been careful about that.

"I suppose I should get pretty mad about this whole business," McNeil continued conversationally, holding the bottle between thumb and forefinger. "But somehow I'm not. Maybe it's because I never had many illusions about human nature. And, of course, I saw it coming a long time ago."

Only the last phrase really reached Grant's consciousness.

"You—saw it coming?"

"Heavens, yes! You're too transparent to make a good criminal, I'm afraid. And now that your little plot's failed it leaves us both in an embarrassing position, doesn't it?"

To this masterly understatement there seemed no possible reply.

"By rights," continued the engineer thoughtfully, "I should now work myself into a good temper, call Venus Central, and denounce you to the authorities.

But it would be a rather pointless thing to do and I've never been much good at losing my temper anyway. Of course, you'll say that's because I'm too lazy—but I don't think so."

He gave Grant a twisted smile.

"Oh, I know what you think about me—you've got me neatly classified in that orderly mind of yours, haven't you? I'm soft and self-indulgent, I haven't any moral courage—or any morals for that matter—and I don't give a damn for anyone but myself. Well, I'm not denying it. Maybe it's ninety percent true. But the odd ten percent is mighty important, Grant!"

Grant felt in no condition to indulge in psychological analysis and this seemed hardly the time for anything of the sort. Besides he was still obsessed with the problem of his failure and the mystery of McNeil's continued existence. McNeil, who knew this perfectly well, seemed in no hurry to satisfy his curiosity.

"Well, what do you intend to do now?" Grant asked, anxious to get it over.

"I would like," said McNeil calmly, "to carry on our discussion where it was interrupted by the coffee."

"You don't mean—"

"But I do. Just as if nothing happened."

"That doesn't make sense. You've got something up your sleeve!" cried Grant.

McNeil sighed. He put down the poison bottle and looked firmly at Grant.

"You're in no position to accuse me of plotting anything. To repeat my earlier remarks, I am suggesting that we decide which one of us shall take poison—only we don't want any more unilateral decisions. Also"—he picked up the bottle again—"it will be the real thing this time. The stuff in here merely leaves a bad taste in the mouth."

**A** LIGHT was beginning to dawn in Grant's mind. "You changed the poison!"

"Naturally. You may think you're a good actor, Grant, but frankly—from the stalls—I thought the performance stank. I could tell you were plotting something, probably before you knew it yourself. In the last few days I've deloused the ship pretty thoroughly. Thinking of all the ways you might

have done me in was quite amusing and helped to pass the time. The poison was so obvious that it was the first thing I fixed. But I rather overdid the danger signals and nearly gave myself away when I took the first sip. Alum doesn't go at all well with coffee."

He gave that wry grin again. "Also, I'd hoped for something more subtle. So far I've found fifteen infallible ways of murdering anyone aboard a spaceship. But I don't propose to describe them now."

This was fantastic, Grant thought. He was being treated not like a criminal but like a rather stupid schoolboy who hadn't done his homework properly.

"Yet you're still willing," said Grant unbelievably, "to start all over again? And you'd take the poison yourself if you lost?"

McNeil was silent for a long time. Then he began, slowly, "I can see that you still don't believe me. It doesn't fit at all nicely into your tidy little picture, does it? But perhaps I can make you understand. It's really quite simple.

"I've enjoyed life, Grant, without many scruples or regrets—but the better part of it's over now and I don't cling to what's left as desperately as you might imagine. Yet while I *am* alive I'm rather particular about some things.

It may surprise you to know that I've got any ideals at all. But I have, Grant—I've always tried to act like a civilized rational being. I've not always succeeded. When I've failed I've tried to redeem myself."

He paused and when he resumed it was as though he and not Grant was on the defensive. "I've never exactly liked you, Grant but I've often admired you and that's why I'm sorry it's come to this. I admired you most of all the day the ship was holed."

For the first time, McNeil seemed to have some difficulty in choosing his words. When he spoke again he avoided Grant's eyes.

"I didn't behave too well then. Something happened that I thought was impossible. I've always been quite sure that I'd never lose my nerve but—well—it was so sudden it knocked me over."

He attempted to hide his embarrassment by humor. "The same sort of thing happened on my very first trip. I was sure I'd never be spacesick—and

as a result I was much worse than if I had not been overconfident. But I got over it and again this time. It was one of the biggest surprises of my life, Grant, when I saw that you of all people were beginning to crack.

"Oh yes—the business of the wines! I can see you're thinking about that. Well, that's one thing I *don't* regret. I said I'd always tried to act like a civilized man—and a civilized man should always know when to get drunk. But perhaps you wouldn't understand."

Oddly enough that was just what Grant was beginning to do. He had caught his first real glimpse of McNeil's intricate and tortuous personality and realized how utterly he had misjudged him. No—misjudged was not the right word. In many ways his judgment had been correct. But it had only touched the surface—he had never suspected the depths that lay beneath.

In a moment of insight that had never come before and from the nature of things could never come again, Grant understood the reasons behind McNeil's action. This was nothing so simple as a coward trying to reinstate himself in the eyes of the world for no one need ever know what happened aboard the *Star Queen*.

In any case McNeil probably cared nothing for the world's opinion, thanks to the sleek self-sufficiency that had so often annoyed Grant. But that very self-sufficiency meant that at all costs he must preserve his own good opinion of himself. Without it life would not be worth living—and McNeil had never accepted life save on his own terms.

THE ENGINEER was watching him intently and must have guessed that Grant was coming near the truth, for he suddenly changed his tone as though he was sorry he had revealed so much of his character.

"Don't think I get a quixotic pleasure from turning the other cheek," he said. "Just consider it from the point of view of pure logic. After all we've got to come to *some* agreement.

"Has it occurred to you that if only one of us survives without a covering message from the other he'll have a very uncomfortable time explaining just what happened?"

In his blind fury Grant had completely forgotten this. But he did not believe



it bulked at all important in McNeil's own thoughts.

"Yes," he said, "I suppose you're right."

He felt far better now. All the hate had drained out of him and he was at peace. The truth was known and he had accepted it. That it was so different from what he had imagined did not seem to matter now.

"Well, let's get it over," he said unemotionally. "There's a new pack of cards lying around somewhere."

"I think we'd better speak to Venus first—both of us," replied McNeil, with peculiar emphasis. "We want a complete agreement on record in case anyone asks awkward questions later."

Grant nodded absently. He did not mind very much now one way or the other. He even smiled, ten minutes later, as he drew his card from the pack and laid it, face, upwards, besides McNeil's.

\* \* \* \*

"So that's the whole story, is it?" said the first mate, wondering how soon he could decently get to the transmitter.

"Yes," said McNeil evenly, "that's all there was to it."

The mate bit his pencil, trying to frame the next question. "And I suppose Grant took it all quite calmly?"

The captain gave him a glare, which he avoided, and McNeil looked at him coldly as if he could see through to the sensation-mongering tabloids ranged behind. He got to his feet and moved over to the observation port.

"You heard his broadcast, didn't you? Wasn't that calm enough?"

The mate sighed. It still seemed hard to believe that in such circumstances two men could have behaved in so reasonable, so unemotional a manner. He

could have pictured all sorts of dramatic possibilities—sudden outbursts of insanity, even attempts at murder. Yet according to McNeil nothing at all happened. It was too bad.

McNeil was speaking again, as if to himself. "Yes, Grant behaved very well—very well indeed. It was a great pity—"

Then he seemed to lose himself in the ever-fresh incomparable glory of the approaching planet. Not far beneath and coming closer by kilometers every second, the snow-white crescent arms of Venus spanned more than half the sky. Down there were life and warmth and civilization—and air.

The future, which not long ago had seemed contracted to a point, had opened out again into all its unknown possibilities and wonders. But behind him McNeil could sense the eyes of his rescuers, probing, questioning—yes, and condemning too.

ALL his life he would hear whispers. Voices would be saying behind his back, "Isn't that the man who—?"

He did not care. For once in his life at least he had done something of which he could feel unashamed. Perhaps one day his own pitiless self-analysis would strip bare the motives behind his actions, would whisper in his ear, "Altruism? Don't be a fool! You did it to bolster up your own good opinion of yourself—so much more important than anyone else's!"

But the perverse maddening voices, which all his life had made nothing seem worthwhile, were silent for the moment and he felt content. He had reached the calm at the center of the hurricane. While it lasted he would enjoy it to the full.

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## AN INTERGALACTIC CONFIDENCE MAN PROMOTES AN ELIXIR OF YOUTH

in

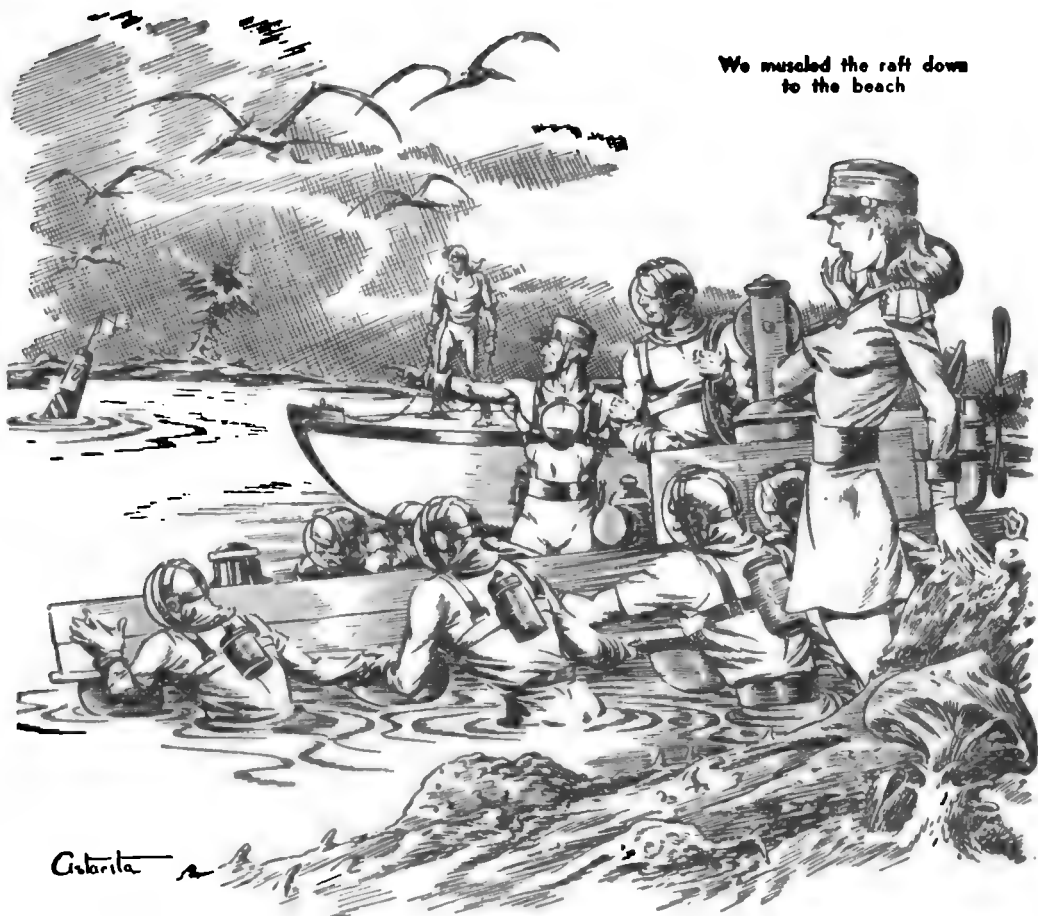
# THE VOICE OF THE LOBSTER

By HENRY KUTTNER

ONE OF NEXT ISSUE'S FEATURED NOVELETS!

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We muscled the raft down  
to the beach

Cabrera

# Thicker than Water

By CLEVE CARTMILL

*Jake Murchison of Space Salvage, Inc., forgoes legalities  
in a desperate battle against disaster on an Arcton lake!*

**I** DIDN'T need to see the deputy's star. I knew he had one by the set of his shoulders, his swagger, his insolent defiance.

"You can see for yourself, Mr. Murchison," he said. "It's an injunction forbidding Space Salvage, Inc., to perform any operations on Arcton until the herculium matter is adjudicated."

I looked at the paper. We stood in

cloud-filtered sunlight on the edge of this ten-mile lake of ooze. Slime would describe it better. It had a body odor. And the humidity!

I was dressed in as little as the law allowed, and sweat ran from my hairline into my eyes, from my armpits down my sides, along the insides of my thighs into my shoes.

"Fine thing," I said, skimming

through the legal phrases. "Prentice McNamy, who is aboard that shuttle ship one hundred feet deep out there in the middle of this lake, forbids us to rescue him. And we were told all personnel would be off the ship when we got here."

The deputy glanced at the worried little man beside him. "Mr. Caar tried," he said, "but he couldn't force the escape tube down to the shuttle ship."

"It's impossible," Mr. Caar squeaked.

"Shut up," I said, and he turned a little green—about the shade of the ten-foot leaves of the *babababa* tree we stood under. "I'm sorry," I apologized. "I'm a little jumpy. That ship out there with ninety-seven people aboard, is running out of air. Every minute we stand here doing nothing brings them nearer to suffocation. I can get 'em out, if we're allowed to operate. Here come my people now."

A big truck came chugging toward us, its tractor treads breaking down the weird yellow vegetation. Carroll was at the wheel, with Cap Lane beside him. They rumbled up to us. Carroll unfolded his seven-foot height out of the cab, took one look at me and came catlike to us.

"Trouble, Jake?" he asked in his incredibly gentle voice.

I waited for Cap, mopping his calm face, wiping sweat from his blue eyes and white hair, to join us. I explained the situation.

"The heck with 'em, then," I concluded. "Let 'em die."

"No, Jake," Cap said calmly. "We can't do that. Those are people out there. We've got to establish communication."

"Fat chance," I snorted.

"We can do it," Carroll murmured.

**WE** ALL looked up at him. One of the sauria birds flew over us as we looked up, and I followed it with my eyes. It suddenly skimmed close to the surface of the lake of slime, scooped up one of the nine-foot surface insects in its alligator jaws and carried the thing, kicking it furred legs, out of sight.

"Oscillators," Carroll said. "We know where the ship is"—he nodded at a flagged buoy in the center of the lake—"and we can rig up an oscillator that will sound Interstellar code against the hull. Get this guy McNamy's consent to go ahead, and start."

The deputy looked dubious. "Well," he said finally, "I guess there's no harm in that."

I ran over to the truck. The native crew sat here and there on machinery and lumber. I checked the equipment, sweating harder than ever after my run.

Compressors, hose, winches, lumber. But no steel rod. That's what I wanted. If we had the equipment, we could rig an oscillator, but it would mean a trip back to Arcton City to get it. Those bells—half globes of rolled ferrulium—might be—

It hit me like a blow. That flagged buoy was attached to the shuttle ship by a steel cable. We could use that.

"Where can we get a flat boat?" I yelled at the deputy.

He scratched his head. "Fellow down the lake about a mile has one, I think. Kind of expensive, though."

"Go get him," I said to Carroll. "Get his boat here, if you have to steal it."

He set off at a lope along the stinking shore. I turned to the boss of the labor gang, distinguished by a foreman's badge and a square chin.

"Build a raft," I ordered. "Forty feet by thirty. See those sections of tubing down there on the dock? Cut a hole in the middle of the raft about two feet bigger in diameter than the tubing. Then—"

I gave him directions and started down to the dock where Mr. Caar's useless equipment was stacked. Over my left shoulder I caught the sound of an approaching vehicle, saw it emerging from the tall grasslike growth. I waited.

Captain Helen Wall emerged from it. Daughter of the president of Solar System Salvage Co., Ltd. A great truth burst in my mind. Solar had tied up our salvage cargo of herculium last month, circulated rumors that we were pirates, and was at this moment—as we were—trying to find the secret laboratory where Professor Phamign, inventor of the founding process for the most impervious alloy in history, had left his notes.

Solar was throwing monkey wrenches at us. It had to be that. This guy McNamy wouldn't have filed an injunction on his own. He wouldn't have known. But if Solar was behind it—and they must be—they could tie us up here while they went on with their search.

I watched Helen as she came toward

me. Her space-captain's uniform, with its twin comets, concealed little of her exciting figure. A master dressmaker had designed that outfit. Her hair flamed red in the subdued light, her eyes were a friendly green, and her lush mouth was parted in a grin.

"Hello, Jake," she said.

My face must have reflected what I felt, for she frowned at my, "How do you do, Captain?"

"What's the matter? I came to offer my services. It's the least I could do after you rescued the *Andromeda* and all my people from that lodestone."

"Thanks," I said, and turned away. "I'm busy."

It wasn't easy, especially as she stood there like a kitten looking at an ice box, but she was with Solar. Don't fraternize with the enemy. That's what it says in my book, anyway. I wanted to go back to her. I wanted to see if that hair was as soft as it looked. I wanted to—

"Move, feet!" I said savagely to myself as I came to a halt. I went on.

CAP was looking over the sections of escape tubing, the lower section being fitted with a sealing device. He looked up as I stood beside him, and I noticed his twin comets needed polishing.

"If we can get it down," he said, "it ought to work."

"We'll get it down," I snarled.

"What's eating you?" he asked calmly. His deep blue eyes swung shoreward, fixed on Helen. "Oh," he said.

"Yes, oh! You see it all, don't you? You're an older man, you can give me good advice. Well, save it! I've had enough of bar-stool philosophy in my day. We've got a job to do!"

"Sure, Jake, sure," Cap Lane said calmly. "Here comes Carroll."

The flat boat skimmed toward us on the film of oil it laid down ahead of it, the big stern fan humming softly. The pilot, a skinny-faced individual with a bulbous nose, slid along beside the dock, an inch at a time and I stepped aboard.

"Got a hammer?" I asked.

He nodded at a locker, and I ordered him out to the buoy. "Name's Harry," he said, and headed for one of those giant spider-like insects.

This skidded off to one side, and watched us with its two dozen eyes with an expression of multiple astonish-

ment as we passed. Its antennae questioned the air in interrogatory hues of orange and purple. Its mandibles clashed in agitation.

"Good eatin'," Harry said, "stuffed with *babababa* berries."

I shuddered, but said nothing.

Carroll had sort of folded his seven-foot length in the stern sheets. "Why the hammer?" he asked softly.

I explained about the steel cable, and he grinned. "Old Spit-and-String Jake," he said.

"That's a high compliment, coming from you," I said. I told him my scheme about the raft. "You'll have to install those bells, Carroll. It'll be tough, in this muck."

He shrugged. "What's a mudder for? That's how I got these shoulders."

We reached the buoy. "Can't stop," Harry said. "Gotta keep movin' or we'll sink. Whatcha want to do?"

"But we have to stop," I said.

"Can't." He wasn't dogged, he was just stating fact. "That oil spray on the bow gives us a slick film to move on. If we stop, we sink. I c'n move slow, though, and I got plenty oil."

"Can you put us in a tight circle around the buoy, so we can hang on to the cable?"

"Might," he said. "Try, anyway."

You wouldn't think that eighteen-foot flatboat could have made such a tight circle. I don't know how he managed it, but we sort of skidded round and round, and it was easy to hang on to the cable.

"You'd better go overboard," I told Carroll. "Hang on the boat with one hand, and put your ear against the cable for their reply. They can bang the cable where it joins the winch for signaling us. Pull it as taut as you can and I'll whang it with the hammer."

I tapped out a call, over and over about six times before Carroll said, "Okay, they hear you."

He held his ear to the cable at the surface while he was being pulled round and round the buoy. "They say go ahead."

I tapped out the story of the injunction, and our situation. Considerable time passed before a reply came.

"McNamy," it said, "barely conscious. Say for gosh sake yes, anything. Our condition desperate. Six hours maximum before deaths begin. Hurry!"



Signed, Captain Ezra Cole."

I whanged out a reassuring "Hang on," and helped Carroll into the boat. He was a mess, dripping that foul-smelling slime all over everything as he and I tried to scrape him clean.

"Sorry about your boat," I said to Harry as he made full-speed for the dock.

He shrugged and plowed through a group of the giant spiders. "People down there," he said. "Boats are cheap."

He zoomed into a mooring cradle at the dock; we lashed the boat and jumped out. I ran over to where the labor gang was putting final touches on the raft, and I saw trouble waiting for me. It had blazing red hair, sparking green eyes and was named Captain Helen Wall. She, Mr. Caar, and the deputy were in a tense group waiting for me.

**I** JUMPED on to the raft, called the foreman. "I want the air compressors here, here, and here," I said, marking rough outlines with chalk. "Cut that hole about here. We want holes in the four corners, two more here and here, for the bushings to hold these bells.

"Carroll!" I called, and he joined me, smelling like last year's fish. "We better make skids for these bells, so we can attach everything ashore. We can't come to a dead stop on that slime to complete the job. There's a stack of sheet meta-plast on the truck. You fix. Cut a hole in each skid about the size of the bell opening and fasten like you never fastened anything.

"Cap!" I yelled, and he came thoughtfully away from La Wall's group. "You can cut the hole in the center of the raft, about six feet in diameter. I'll check the compressors now. Fast as you can, men! We don't have much time."

I jumped off the raft and trotted toward the truck.

"Mr. Murchison!" the deputy called.

"Some other time," I said. "I'm busy."

"You'd better know about this," he said grimly.

I joined the group. Helen's eyes still sparked, and her mouth was compressed into a line. Mr. Caar looked like a diffident rodent facing an attacker, scared but determined to stand his ground as long as possible.

"Now what?" I asked.

"You've got to stop this idiocy at once," Helen said.

My mouth must have dropped open. After a couple of seconds of shock, I remembered to shut it and swallow.

"Now what?" I said. "More monkey wrenches?"

"Mr. Caar," she said firmly, "knows more about that situation than you do. It's obvious what you're up to. You intend to anchor over that buoy and force the escape tube down to the hatch. You can't, he says, and he should know. He tried it from a balloon. You can't remain motionless on that surface, no matter how big your raft, with all that weight on it plus your crew. And you must remain motionless, or you can't put the tube down.

"Is that all?" I asked, and my tone made her flush.

"Stop treating me like I was three years old!" she said furiously.

"Then stop acting like it."

"All right," she said coldly, formally. "I warn you, Mr. Murchison, in front of witnesses. If you persist in this hare-brained scheme, and if those people die as a result of your failure, I, as a representative of the Solar System Salvage, will file charges of negligent and willful homicide against you and everybody concerned in the so-called rescue."

I looked at her for a long time. "A few unimportant details," I said, "distinguish you from a man. Conditioning stops me from knocking the tar out of you. But I will tell you this. It's characteristic of any Solar employee to give my outfit a black eye, even at the expense of ninety-seven lives."

I might as well have hit her. She staggered away from the savagery of my voice. "No," she whispered. "That isn't true!"

"Like heck it isn't true. You, as a representative of Solar, have held me up enough on this job. Can you get it through that thick—but pretty, I admit—skull that those are people out there, and minutes are precious? Now. Is that all?"

**S**HE drew herself up, and if she had tears in her eyes so who cares? She had no tears in her voice. It was the crisp voice of a space captain.

"That's all!" she snapped. "Since you won't listen to reason, you can abide by the results. I'm deadly serious."

I sighed. "Okay, what do you suggest?"

"Some way of raising the ship itself."

"Look." I was patient, and if that's bragging, no matter. "We came up here to raise the ship, and the ship only. Mr. Nincompoop here—"

Mr. Caar flushed. "I—I tried," he said, like a spaniel.

"I'm sorry again," I said, and turned to Helen. "Mr. Caar was supposed to take the personnel off. He couldn't. Meanwhile, I used the jacks for this job to pry your ship loose from that magnetic asteroid and had to lose them. I thought we'd have plenty of time for this job. Now, it turns out we've got six hours.

"I had planned to pump the ship empty of air and full of helium to raise it. I can't do that with people aboard. And there aren't any other jacks like those we lost. They were specially made. You go right ahead, sister, and file any charges you please. Meanwhile, let me alone. I'm busy."

I didn't give her a chance to reply. I went on to the truck. I didn't trot. I walked, slowly and thoughtfully. I hadn't looked at the problem before from the viewpoint of an impartial observer. But she wasn't impartial. Mr. Caar, the worry wart, chagrined at his own failure, couldn't admit that the job might be done by anybody else. He communicated his worries to her, and she, being a member of the Solar crowd, seized delightedly on the first club that came to hand.

The hell of it was, she was right. Caar had a considerable local reputation and his testimony would carry weight with a jury. Add Helen's testimony, and the deputy's, that I had been warned my scheme wouldn't work—and if it didn't work—we were dead diplodocci.

It was only fair to put it up to the others. I went back to the raft and stopped all work. We held a confab. I explained the situation.

"So there it is," I said. "We're wasting valuable minutes here talking, maybe critical minutes. I think this method will work, but I could be wrong. We don't have time to dream up anything else. We either go ahead on my scheme, or we just go away and let all those people die. But if we do try it, and fail, we're stuck for the consequences. Take a vote. What do you want to do?"

"Let's get to work," Carroll said softly. Cap nodded his okay.

Two of the workmen, however, were scared out. Or lazy. The rest stuck, and Harry, the boatman, spoke up.

"I c'n do more'n them two," he said. "Where's a wrench?"

It wasn't really a cheering matter, but everybody applauded.

I checked the compressors, built of featherweight metaplast, each having a 1200-inch capacity. The giant generator, powered by captured radiant heat, hummed like a contented baby. I moved the load down to the raft, and we started putting things together.

**W**E bolted down the compressors and winches, ran lines to the generator, and loaded two sections of the escape tube. We attached high-pressure hoses to the bottom section, which could be sealed against the ship—if we ever got it down.

When the last job was finished, we had about three hours left within the framework of a maximum six hours. Harry came over to me. He looked at me, at the ground, at me again.

"Reckon I can't go through with it," he said.

"I'm getting tired," I said. "I'm mostly sweat and fatigue. Now what?"

"I c'n haul you over that buoy," he said. "'N maybe you c'n stay afloat. But I'll sink instantly. Told you I can't stop on that stuff."

I was always pretty good at explaining things to children as long as I didn't lose my temper. I held it in this time, but it cost me more sweat.

"We'll cast off when we get there," I said slowly. "Then you'll hightail it back here to bring out sections of the escape tube. You'll work like mad, at full speed, because once we start down with that tube it'll go pretty fast."

"Oh," he said. He looked up at me, grinned faintly. "I'll broaden my spray," he said, "and give you a film for them skids."

We muscled the raft down to the beach. I thought of it as the beach, because by now I wasn't noticing the smell. We latched on to Harry's boat, he took off, and we shoved until the raft was afloat. Then Cap, Carroll and I jumped aboard. The labor gang, the deputy, and even Mr. Caar cheered us. Helen—Captain—Wall seemed to be crying, but I was too busy to make sure.

"Start your generator and compres-

sors," I ordered Cap. "Where's that bucket of corks?"

I found the corks, and while I explained their purpose to Carroll, I watched the pressure gauges. All that machinery made quite a racket, and the raft throbbed gently. But the needles rose steadily toward the 500-pound mark, where the compressors would cut out automatically. I wanted to pat those gauges on the head. They indicated life or death for a lot of people—including us.

"We'll hang these corks from the edges," I told Carroll. "Just above the surface. Then, if any section of the raft starts down, the cork there will hit the surface, and the string go slack. You can watch one side, I'll take the other. Cap has a valve for each of those pressure bells. We simply tell him where we want more air."

We must have looked strange to those giant spiders—or to anybody, for that matter. They began to cluster around us, their antennae a mass of shifting rainbow hues, their clicking mandibles audible above the clamor we were making. Carroll eyed them a little nervously, and my hand shook a little too as several looked as if they were going to jump aboard.

"Hey, are these things dangerous?" I yelled at Harry.

"Never know," he said cheerfully. "Sometimes, if they get mad."

"What makes 'em mad?"

"Nobody knows," he said.

"That's just dandy," I said to Carroll, and he grinned frozenly.

But we strung our corks at intervals while the compressors happily squeezed in the fetid air. I could imagine the compression chambers gagging as that first rush of thick air came in. And while we strung our corks, we had an interested audience.

One after another the spiders inspected the corks, touching them with blue and yellow antennae, and each took a speculative nip. We were thankful a cork wasn't their dish of tea.

By the time we were nearing the buoy, I saw toy vehicles arriving on shore, and toy people joining the group we'd left behind. We were going to have plenty of witnesses to our rescue—or failure.

"Ease off," I called to Harry.

The compressors began to cut out, one at a time, as each gauge registered 500.

"Nice timing," I said. "Shoot a little air into each bell," I told Cap. "About fifty pounds, I'd guess."

**H**E worked gauges as I guided Harry in a straight run—crawl, rather—over the buoy. The inverted pressure bells on their skids held the deck high enough to clear the buoy, but the flag stuck several feet into the air. I plucked it out as the leading edge of the raft was near enough, and the buoy slid out of sight under us and the center hole moved toward it.

"Axes," Carroll said, and handed me one. Each of us took a post at a towing line.

"Watch the hole, Cap," I said. "Slow as possible, Harry!"

We inched forward.

"Stand by the valves, Cap."

"Aye, aye."

"This is it," I said. "We're only guessing at the pressure necessary to keep us afloat. You may have to work like lightning, Cap. We'll do our best to give you clear directions."

"Buoy in sight," Cap said, "at edge of hole, one foot, two feet—cast off!"

Carroll and I chopped the lines simultaneously and leaped to our respective sides, flung ourselves full length, and watched the corks.

A string went slack. "Port side, aft, more!"

Air hissed, the string tautened. "Starboard, center, more!" Carroll called.

Air hissed again, as something cold and slimy touched the back of my neck. I swiped at it, and from the corner of my eye saw one of the giant spiders skid away a few feet, where it clicked angrily, its antennae a bright red. I didn't have time to look or worry.

"Port, forward, quick!" I called.

Air hissed, the deck raised, and a big bubble that would have smelled awful to a newcomer, broke from under the bell.

Seconds passed, with no orders. Then a minute. I got up, literally streaming sweat.

"I guess that's it," I said. "Now for the big job."

"Behind you, Jake!" Cap yelled.

I whirled. The big spider was red all over now, and coming at me. Not with the characteristic gay speed, but slowly, ominously. I looked around for a weapon. There wasn't any.

I got icicles on my neck, wondering

what to do. The thing towered over me, raised to its full height, and those mandibles looked as if they could lop off my head. "Give me some air," Carroll said behind me.

A stream of air practically roared over my head and blew the spider head over tail about fifty feet away. It looked surprised for a minute, then departed full speed for home and mama.

I grinned at Carroll. He rewound several feet of the emergency hose on the winch. "That's one thing that makes 'em mad, Jake," he said gently. "Whatever you did to it."

"It was scratching my neck. I slapped it. Let's go to work. By the way, thanks. That was quick thinking."

We made a final check on the lower, and most important, section of the tube. The hose nozzles were set so as to blow the muck away as it went down, keeping the tube empty. The sealing flap, a wide collar of rubber, was folded against the outside, held by an assembly which could be released from the inside. The theory was that if this were released, and the air cut off, the pressure of the slime would force the flap against the hull of the ship down there and seal it tight.

Mr. Caar, I had discovered shortly after we arrived at Arcton City, had failed because he had conceived the buoy as a guide. The buoy, a hollow sphere filled with buoyant gas, was directly over the escape hatch, and its cable was the only guide to the sunken ship. But if the compressed air blew the muck away ahead of the tube, it would certainly blow the buoy away too.

**T**HE solution was simple. We attached the buoy to the bottom of the tube. All that was necessary then was for the captain of the shuttle ship to reel in the buoy cable at the slowest possible speed. We didn't have to do anything but keep the air hoses clear and screw each succeeding section in place as the preceding one sank.

We established communication by hammer. I tapped out the situation to Captain Cole and told him what to do.

"Thank gosh," he replied. "Signal when ready."

"Give us some air," I told Cap.

He opened valves on the second compressor, and the muck blew away from the tube—all over us.

"Not so much!"

I gave a go ahead signal, and the section started down, an inch at a time.

We screwed on the next section. Harry came alongside then, with two workmen and six more sections. They strung these along the deck, as Harry couldn't stop anywhere, and buzzed off for more, with orders to get more boats to haul passengers—if we got any out.

We had one hour remaining in our allotted six when we had the bottom end of the tube against the ship. Carroll and I were stinking messes of our own perspiration and spray from the stream of bursting bubbles that poured up outside the tube. We placed the anchor collar over the tube and bolted it down. That cut off the spray from bubbles, but too late to matter.

"I didn't want to bother you," Cap said in his unhurried manner, "but the pressure on the forward port bell is dropping, and so is the forward port corner."

Carroll almost beat me to the corner. We found the trouble in a hurry—the bushing had sprung a leak, and we gave the wrench a ten-second work-out.

"Not that it matters," I said. "We can't sink now as long as that escape tube stays upright. Keep your weather eye on the gauges, Cap, but you'll have plenty of warning before anything goes wrong. I hope. Well, here goes—where's the harness?"

"Let me go," Carroll said. "I'm in better shape than you. You look like you've been buried three years."

I eyed his spattered, dripping, king-size hulk. "You're no beauty yourself. I wish I could let you go, Carroll. But I haven't got four-foot shoulders. You have to bend over to release those sealing flaps, and I don't think you could. If you couldn't we'd have to haul you out and send me down, anyway. That would waste time, and time is what we haven't got."

"I guess you're right, Jake."

I put on the lowering harness, and climbed into the tube. Cap just glanced at me, keeping his eyes on various gauges, as was right, but Carroll looked worried. That is, the slime that passed for his face looked worried.

"You'd better take a signal line, Jake."

"Why?"

"Well, here's the situation. We think



we've centered this tube on the ship. It's almost sure. But suppose something—I don't know what, should jam that sealing flap so it won't quite close. Muck would flood into the tube and you'd drown before we knew anything about it."

"Lord, you're right. I hadn't thought of that."

I tied a light line to my wrist, and Carroll got set to tend both lines. "Four tugs," I said, "will mean shut off the air."

"Right."

"Lower away."

**I**T got darker and darker as I went down. I took the flashlight off my belt and pointed it down. There, against the hull of the ship, was the buoy.

I came to rest on it, slid a hand down around its slimy side and tripped the sealing mechanism. I couldn't tell if it worked or not, what with the roar of air that kept the bottom of the tube clear.

If it had worked, I'd be safe, and so would all those people beneath my feet. If it hadn't—

I yanked the signal line four times and wiped muck and sweat off my face.

The roar ceased. I tensed my hand to signal. Nothing happened. It was sealed.

I beat signals against the hull, and got an okay. I unfastened the lashings which had held the buoy cable to the escape tube and pulled it down perfectly straight. We had to get that three-foot ball out of the way before anything else. This meant a round trip with the cable, and more time. Precious time. Still, I couldn't let them cut the cable in two inside the ship. That gas-filled ball would shoot up like a rocket and might possibly explode in the tube and tear a hole. I couldn't take a chance.

I went up, beat a signal on the tube to let the buoy come up. Up it came, banging a little on the walls. We spliced a line to the cable below it, and I lit a cutting torch.

"Just hold the cable so it doesn't fall," I told Carroll, "and stand clear. That buoy's going places."

The buoy went up and out of our lives in a hurry. A string of flatboats now approached us, Harry in the lead. He waved, and started a wide circle around us, the others following. The spiders, which had sort of given us up, had fun

skating in and out of the parade.

I signaled to haul in on the cable and went down with it, holding the splice in one hand. On the way down I thought of Helen Wall and her threat and suppressed a grin. It wasn't time to celebrate yet. It looked good, but wasn't over. There was the matter of ninety-odd bodies, all, I hoped fervently, alive.

I called a halt near the hull, unspliced the cable, and signaled to reel it in.

The end of it disappeared inside, the sound of bolts and valves came through the hull. The hatch opened, a face peered up at me.

"Thank heaven," it croaked.

I signaled to lower away, and Carroll dropped me into the ship. The face belonged to Captain Ezra Cole, a once-spruce dark-haired man of forty, with mellow brown eyes. He was the only person in sight who was on his feet. Passengers lay everywhere, mouths open, gasping. Some had their eyes closed. Dead?

We wasted no breath in speech. I got out of my harness, and Captain Cole and I loaded in the first passenger. She was a young woman with drowsy eyes.

"Listen," I said to her. "Remember this. You're safe. Everything's all right. But some of these people might die if we don't get some fresh air. This place smells worse than I do. When you get to the top, tell them to send down the emergency air hose. Got it?"

"'Mergency air hose," she muttered sleepily.

"Keep saying it," I said. "Over and over."

I signaled to haul in, and she disappeared up the shaft.

Air revived them. They came back one by one from the border world between death and paying rent, and Captain Cole and I sent them up one at a time. I was going through the motions mechanically now, forcing my aching muscles to haul, shove and buckle. Then signal. Once I signaled four times, and Carroll shut off the air. Captain Cole and I looked stupidly at each other as the hissing stopped. It was probably a full minute before we realized what had happened, and another five minutes before we could make Carroll understand what to do.

Captain Cole's face was haggard, bearded and white, like plants that grow in the dark. I don't know what mine looked like, with the slime and sweat,

but it felt like it had been ground with sand.

One person began to look like another, and then they stopped resembling people. Each one was just another load, another impossible job to do.

Finally we were done. Captain Cole and I looked around. The big recreation hall was empty.

"How many 'board," I muttered.

"Nine'y semm," he said.

"How many sent up?"

"Dunno," he said vacuously.

"G'on up," I said. "You go see."

"No, you. Cap'n this ship. Last off."

"Okay," I sighed. "You boss. Gotta drink?"

"Fie can find it, sure."

He staggered over to a closet, fumbled for his keys, opened it and staggered back with a bottle. He pulled the cork.

"After you," he said.

That was what the doctor ordered. A delicious energy seeped into my consciousness, along my aching arms and legs. My eyes began to come awake. Some of the blur went away.

Captain Cole took a hearty swig and managed a sort of grin as I started up to see how many we'd sent out. The count was complete, and we sent down the harness for the captain.

**T**HE General Hospital at Arcton City was like almost any other, and Prentice McNamy lay in bed like any other patient. He was mad, like many patients in many hospitals, but unlike most, he wasn't mad at the hospital.

"I don't know what it's all about," he told me and Cap. "An officer of Solar System Salvage came to me about six weeks ago and said that cargo of herculium originally bound for Cambellon, or the third planet of Arcton as you call it, had been salvaged. He said that as an heir of the original purchasers I was entitled to a share. He said the best thing I could do was to join the other heirs and file an injunction against you."

I brought him up to date. I explained how Solar was after the secret of herculium, presumably in a secret place, known only to the late Professor Phamign.

"They're after it," I said, "and so are we. They've used whatever delaying tactics they can think of. I guess they've been looking for it while we worked on that shuttle ship."

"People told me what you did there," McNamy said, his thin face glowing. "I can't thank you enough, of course, and anything you want from me—"

Somebody came into the room. I assumed it was the nurse and didn't turn around.

"As I get it," I said, "you fronted for the heirs of the purchasers of that cargo? And the insurance company restored their money around a hundred years ago?"

"That's right."

"But Solar told you you had rights in it, even though it had been paid off, and persuaded you to file this injunction?"

"Right again."

"Well, Mr. McNamy, you can see the fallacy in that. The ship we salvaged the cargo from was a drifting derelict. Anything we got from her is ours, under Interstellar Law."

"Of course, I see it," he said. "But I wasn't told that before. There were even some hints of piracy. I'll withdraw the injunction as soon as I can get my lawyer here, and I promise there'll never be any suit."

"That's all we want," I said. "So we'll be on our way."

"Just a minute," he said, raising a languid hand from the white covers. "Nobody knows this but me, I think. Professor Phamign's private laboratory was on an asteroid. I can give you the original orbit of that asteroid when I can get to my office. But the asteroid, and the entire group of which it was a member, wandered off, attracted by a comet that passed too close."

"My gosh," I said, "with that information we could really start to work, and now that our cargo has been released we can sell it and have plenty of money to conduct the search. How come you know about it?"

"My grandfather knew Phamign," he said. "He kept a diary. I have it."

"Then we'll call at your office. Thanks very much."

I turned to go out, and froze. It hadn't been a nurse. It was Helen.

"So now Solar will know about it, too," I said.

Her face flamed almost as red as her hair. "You fool!" she said, and she was on the verge of crying. "I didn't know anything about where that injunction originated. But I'm going to see my father, and see that some heads fall."

And don't you worry about this information—" She nodded at McNamy—"going any further. I hope—oh, how I hope!—you get the dope before anybody else!"

"Pretty strange," I said, "you being right on the spot after that injunction was served."

"All right," she said. "I'm going to lead with my throat. I really looked you up to thank you again for what you did for me and those with me. And because I liked you and wanted to see you again. You've got a kind of lopsided smile that appeals to me. And you did a wonderful job on that shuttle ship! That's why I followed you here—to tell you. And to

tell you you didn't give me a chance to say I saw your position and wouldn't file charges even if you hadn't saved those people. Now—drat you, Jake Murchison!"

She whirled and stumbled toward the door.

It was easy to catch her. I never moved so fast before.

"Hey," I said. "Listen. Suppose I buy you a drink and we talk this over?"

She mutinously refused to look at me, but she nodded.

"Join us, Cap?" I asked.

"I think you can do this job without help," he said dryly. "If not, it's time you learned."



## Wonder Oddities

**W**INTER sleet, or frozen raindrops, are more complex than is generally supposed, according to Japanese scientist Dr. Kotaro Honda. They are not solid bits of ice but are actually solidly-frozen spheres with liquid centers that never freeze, thanks to an internal pressure of some 50,000 pounds per square inch.

**O**LDER by far than scientists formerly calculated are the ants and other insects found embalmed in the amber of the Baltic beaches, say Harvard entomologist Dr. Frank M. Carpenter and Dr. J. P. Marble of the U. S. National Museum. Previously held to be eight or nine million years old, recent studies have convinced the scientists that their years number from 55 to 60 millions of years.

**N**EWEST instrument being developed for moon-travel research is a metal sphere produced by the Armour Research Foundation of Illinois Tech. Containing radio transmitter and parachute to bring it safely back to earth, the sphere, which is planned to be fired from rockets at 70 miles up, contains instruments built to measure everything from cosmic radiation to air pressure and temperature.

**D**ELTAS are where you find them if the Dead River in Maine is any indication. This brief stream, which normally flows from Androscoggin Lake into the Androscoggin River over its seven-mile length, suffers a reversal of direction every spring when floodwaters lift the level of the river above that of the lake. Hence it has actually formed a delta at the wrong end.

**E**VENTUAL aid to solar soil heating has been developed from carbon black, a substance obtained from natural gas and previously used to toughen automobile tires, by scientists of the Massachusetts Agricultural College. Cheap and easy to spread, the carbon black has kept large areas of tilled land from two to four degrees Fahrenheit warmer than untreated surrounding soil.

**R**EPLACEMENT for the famed Geiger counter for measurement of atomic radiation intensity is probable if the new alpha scintillation counter, developed by scientists of the Atomic Energy Project, working at UCLA, proves satisfactory. About the size of a table-model radio, it is far faster and more sensitive in giving accurate measurement to low-count samples of soil and ore.

# the Colorful Character



Koskelainen broke into  
a run

by  
**L. SPRAGUE  
DE CAMP**

**G**REGORY LAWRENCE put away his notes about food-chains among the fresh-water organisms of the Pichidé River on the planet Krishna. He yawned, stretched, lit a cigarette, and said: "I hear we're supposed to be swept off our feet, beginning tonight."

Reginald Schmidt, at the next desk,

raised his eyebrows, though the pale eyes remained as noncommittal as ever behind their glasses. "Uh—what's that?"

"The celebrity arrives to take the Institute by storm."

"What celebrity?"

"Hadn't you heard? Jeepers, you must

*When Sir Erik Koskelainen arrives on Earth to take the Institute by storm, a scientist and a centaur form the reception committee!*



lead a sheltered life, boss. I refer to the great explorer of far planets, Sir Erik Koskelainen."

"Erik Kos—here on Earth?" Schmidt, caught in the act of lighting his pipe, stared open-mouthed at his assistant until the match burned his fingers. He dropped it, swore mildly, and lit another.

Lawrence, watching the big light-haired man, tried to make out the expression on the flat face. It was certainly more animated than he had ever seen Reggie look before, but he couldn't be sure of the meaning of the expression. It might betoken a mixture of astonishment, curiosity, indignation, and amusement, all struggling for supremacy.

"You know him?" said Lawrence.

"I know of him," mumbled Schmidt through his bush of mustache and around the stem of his pipe. He drew heavily on the pipe between words. "Uh—what's this visit all about?"

Lawrence shrugged. "He'll be after a grant from the Institute, I suppose. He's a guest of the Ferreiras, who are throwing a big party for him at the Princeton Saturday. Going?"

Schmidt frowned at his pipe-bowl, looking a little cross-eyed as he did so. "Dunno. I usually duck those things."

"Better come. This guy is said to be a very colorful character. By the way, since you know about him, do you know if he's married?"

Up went the eyebrows again. "Not that I know of. Afraid he'll—uh—make time with Licia?"

"He might. You know how women are. He worries me. You see, I'm no colorful character."

SCHMIDT nodded. "You're right there, Greg. You may make a good ecologist some day, but nobody would call you picturesque. How's the *affaire Licia Ferreira* coming?"

"So-so. I'm going over to spend the evening sitting in the Ferreiras' parlor again."

"Smatter, can't you afford to take the doe out?"

"You don't date Brazzy girls that way. It would be what they call an intrigue, and—well, anyway, they have their own code in those matters."

"Don't think that even if you marry the dame, as you seem determined to do, it'll get you any professional advancement or special grants. Ferreira's incor-

ruptible, and even if he weren't, the other members of the Finance Committee—"

"I never had anything of the sort in mind!" cried Lawrence loudly. "She's just a swell wren!"

He dropped his voice as their colleague Louis Prevost stuck his long sad face around the door-jamb and said: "You geniuses through for the day?" Prevost was an old-timer at the Institute by comparison with both Schmidt and Lawrence.

"Yep," said Lawrence. "How's the study of that misbegotten centaur of yours coming?"

Prevost sighed. "Magramen's losing friends and alienating people as usual. I think he ought to be called half man and half mule instead of half man and half horse."

"Mind if I look in on him again?" asked Lawrence.

"Not at all," said Prevost. "Maybe you can figure out a way to sweeten his disposition."

Lawrence asked Schmidt: "Want to see him too?"

Schmidt shook his head. "For some reason I've never had much interest in the Dzlieri. If I ever get around to working on the xenology of Vishnu, then maybe I'll take a squint."

Lawrence followed Prevost down to the ground floor of the laboratory building, saying: "Maybe you could feed him an undergraduate every week. The way the guy in the myth did to his pet critter—you know, the half-bull, half-man."

Prevost shook his head. "I've been tempted, but Magramen's a pure vegetarian."

Lawrence's nose told him they were approaching Magramen's stall. The Dzlieri was not really half man and half horse. The front or upright part of him was not entirely human, with its long pointed ears, prognathous face, four-fingered hands, and solid coat of short glossy reddish hair. Nor was the rest of the extra-terrestrial strictly horse, with its three-toed feet and tufted tail. Still, the resemblance to a centaur was close enough to warrant the use of the term by those who found the native Vishnuvan name hard.

Magramen paused in his eternal munching long enough to say: "What you two want, huh?"

"Just thought I'd say hello," said Law-

rence. "How's the Earth treating you?"

"Your Earth treat me rotten," roared Magramen, waving his salad-fork. "This morning I read newspaper about horse-race. I ask Dr. Prevost simple thing—to go to race, enter myself, win a lot of a money. No harm, huh? No, stupid Mushroom Prevost say no. Horserace people no let me in, he say."

"Well?" said Lawrence.

"What he know? Never attend race in him life. Talk about science, how we must not never jump to conclusions. But won't let me go to race, see if *os fiscais* won't let me in. This *estúpido* think I can *shoris agheara gakhda* all day telling legends of Dzlieri; what think *idzeli-buli* do?"

"Hey!" cried Lawrence. "I can't follow you when you talk three languages at once. I'm afraid Louie's right about the race, though. They'd disqualify you. But if you want some exercise, when are you going to let me ride you again?"

"Never! All those saddles and things, they itch. Tell you what you do, Gregoryen. Get real horse and we have race, you on horse, me all by self, Huh?"

"Jeepers, that would be a sight! I'll think about it. Have a cigarette?"

"*Obrigado*. Too much red tape on Earth. I think I go back to Vishnu."

"When your contract is up," reminded Prevost.

Magramen told Prevost what to do with his contract, and they left him glowering and puffing furiously.

GREGORY LAWRENCE showed up on the Ferreira doorstep at the usual time, shook hands with the lovely brunette, and settled down to an evening of chaff under the watchful eye of Senhora Ferreira. His willingness to put up with this treatment had so far given him an edge over the undergraduates from the University who would otherwise have swarmed about Lícia Ferreira.

This time Lawrence had not gotten very far in his campaign, however, when the doorbell rang again. Lícia bounced out of her chair to answer it. Lawrence heard:

"But surely, come in, Mr. Koskelainen; we've been expecting you. Oh, *Pai!*"

Ferreira's goatee swam into view to meet the new arrival, and the voice of the chairman of the Finance Committee

said: "A great pleasure, Sir Erik. This is my wife, and my youngest daughter Lícia. And this is Dr. Lawrence, who works with Dr. Schmidt on his ecological survey project at the Institute."

The conqueror of far planets shot out a hand of long fingers taut with latent strength to seize Lawrence's hand and wring it—not quite hard enough to hurt, but hard enough to suggest that they could crush if they wanted to.

He was really a most impressive figure, Lawrence admitted to himself with a pang of envy: tall, broad-shouldered and slim-waisted, with light hair combined with wide cheek-bones and flattish features that gave him a slightly Mongoloid look, but still handsome by conventional standards. The man seemed to be at that delightfully indeterminate age when one is old enough to have had a past and still young enough to have a future. His clothes were the height of something or other, beginning with a red-lined Hollywood cape thrown back over one shoulder.

Jeepers, thought Lawrence, my worst fears are realized.

Here Lawrence was, a perfectly ordinary-looking young man, forced to compete with this exhibitionistic hero. Maybe he ought to cultivate some deliberate eccentricity of appearance or behavior, such as growing a beard or keeping a pet ostrich, to lift the curse of his common-placeness.

Piercing eyes bored into his, and Koskelainen boomed: "Why, I know you by reputation, Dr. Lawrence!"

"Me?" Greg Lawrence had hardly thought of himself as yet having a reputation he could be known by.

"Certainly. Didn't you do that excellent report on the balance between earthworms and soil bacteria in the Philippine Islands?"

"Y-yes, I suppose so."

"Well then?" Koskelainen clapped Lawrence lightly on the shoulder. "Of course I know all you fellows are geniuses or you couldn't get in here in the first place. Don't look cross, I'm not being sarcastic. I know a sound grasp of a subject when I see it, and why shouldn't you recognize your own worth? I envy you, you know; I'm no genius. I've just had a run of luck and the knack of handling men in tight places. How'd you like to go with me some time?" The visitor emphasized his points with graceful

movements of his finger-tips.

A little overwhelmed by this flow of talk, Lawrence could only say: "Huh?"

"Sure. You know that project of mine? The thing I'm really here about? It's to persuade Dr. Ferreira and his colleagues to set up a complete biological survey of Ganesha. Never been done. We'd go in three or four teams, each of which would need at least one good ecologist. Sounds to me as if you'd be the kind I'd want: young, healthy, good reflexes, devoted to the job, and with a solid grasp of his specialty. The pay would be right, too. Of course there'd be some risk in a wild world like Ganesha, but I know a man of your type wouldn't let that deter him."

"Well—uh—I—" Lawrence felt himself torn several ways. Prepared to loathe this overpowering stranger, he felt himself succumbing to the man's extraordinary charm. The offer was most flattering, and just what he'd long dreamed of—though on the other hand it would take him away from Lícia for several years at a stretch.

**K**OSKELAINEN, as if reading his thoughts, said: "You can't answer now, of course, since nothing's settled yet. But bear it in mind; we'll talk about it some more." He turned to his host. "You know, Dr. Ferreira, you really have no business introducing me to such ravishingly beautiful daughters. First thing you know I'll be chucking the project in order to gaggle after them. Don't mind me, Senhorita; I just rattle on this way to hide my inferiority complex. Now, tell me about yourselves. Must get oriented, you know. What does Miss Ferreira do? College?"

\* \* \* \* \*

"What's—uh—what hit you?" asked Schmidt when Lawrence showed up at the laboratory next morning.

"You mean this vacant, lost look on my face?" said that young man. "I've just been given the double-whammy by Sir Erik Koskelainen, and the effect hasn't yet worn off."

"How d'you mean?"

Lawrence told of the explorer's arrival. "When I shoved off at twenty-two he was still at it. Boy, if I had that personality and those looks I wouldn't need any brains. He did most of the talking, but he was so danged amusing and flattering about it that nobody minded.

When I got home I wrote down some of the funny stories he told so I can use 'em myself some time."

"A formidable type, huh?"

"I should say so. In theory I hate his viscera, but if he walked in here now, he could talk me into anything. I'd be putty in his hands."

Schmidt was digging at the bowl of his pipe. "Did he say what brought him to the Institute of Advanced Study?"

"Yeah, I was going to tell you." Lawrence described the explorer's project for a complete biological survey of the planet Ganesha.

"Hm," said Schmidt. "That would cost a bit. Let me think! . . . Off-hand, I should say that it would absorb every nickel of the appropriation for new projects, and probably soak up some of the funds for old ones as well."

"You mean it might cut into ours too?"

"Don't know yet, but it might. Think I'll look in on this shindy Saturday after all. Meanwhile keep your eye on Sir Erik."

Next day Lawrence told his superior: "Something's up, all right. When I called up to arrange my usual session at the Ferreiras' last night, it turned out Koskelainen was taking the whole lot out to dinner; some fancy place in the city. And then when I asked about tonight, Lícia told me she had a date with him. A date, mind you! This guy must have hypnotized Papa Ferreira or something, because he wouldn't violate his old Brazilian customs for anything less. Where does that leave me?"

"Uh—up a well-known tributary without adequate means of propulsion," said Schmidt. "It won't comfort you any, but you ought to know that nobody can get near this Sir Erik during the day, either. He's closeted with the Finance Committee from morning to night. It's what, in the military schools on Krishna, they call a lightning offensive."

"You been there?" Lawrence asked, for Schmidt, during the few months they had worked together, had been close-mouthed about his background.

Schmidt nodded briefly. "Once. A war-like lot, and crazy to get modern Earthly weapons. Good thing the Interplanetary Council made the *Viagens Interplanetarias* exclude all gadgets from the planet. By the way, where can I borrow a dinner-jacket with the fixings?"

"I've got an old one I outgrew some years ago."

"Not big enough for my purposes."

"Why, haven't you one of your own?"

"Yes, but this is for another guest."

"Who?"

"You'll see."

SCHMIDT had promised to drive Lawrence to the Princeton for the Institute dinner in honor of Sir Erik. Lawrence, however, was not prepared for having his boss drive up in a truck.

"What the devil, Reggie?" he cried. "That tux sure looks out of place in that van."

Schmidt puffed unperturbed on his pipe and jerked a thumb towards the rear. "Got another guest with us."

"Who?"

"Uh—Magramen."

"What?"

"Yeah. He's eligible, since he's doing professional work on a project. And his table-manners can really be quite good when he takes the trouble."

"My gosh! You don't know what you're getting us into! If he thinks somebody's crossing him, he's apt to get mad and start slinging soup-bowls around the room, with the soup in them. Why did you ever ask him? I thought you had no particular use for Dzlieri."

"I had a particular use for him this time. And he'll behave."

At the hotel they got out and let down the tailgate. There was a scrambling sound from within, and the Dzlieri leaped lightly to the ground and brushed the sleeves of his dinner-jacket with his hands. Lawrence jerked in his breath when he saw the extra-terrestrial, who had his face shaved and the quasi-human part of his body clad in a dress shirt and a dinner-coat.

Schmidt said: "I thought of trying to get some sort of special pants with four legs to go over his horse part, but there wasn't time. I guess they'll consider him—ah—decent."

"Jeepers," said Lawrence, "I think he'll be spectacular enough as he is."

"Got plenty salad? Plenty cocktail?" said Magramen. "I are hungry."

"You're always hungry, old horse," said Schmidt.

"Gotta have plenty cocktail to stand a sight of Earthmen eating meat," continued the Vishnuvan. "Disgusting species."

"That'll be taken care of," said Schmidt. "I'll even treat you, since I know you're the Galaxy's leading tightwad. Come on."

The big xenologist led the way into the hotel. He and Lawrence had to hold the folding front doors open to let Magramen pass through, since the extraterrestrial could not manage them himself because of his length of body. He went, grumbling about the stupidity of Earthly architects.

The people in the lobby showed only a mild interest in Magramen. After all they knew about Dzlieri and other extraterrestrial species. Many of them had seen Magramen himself cantering about the town with Lawrence on his back, and finally they were hardened to the outlandish creatures that sometimes frequented the Institute of Advanced Study.

The three marched into the cocktail lounge, which was swarming with savants who made respectful way for the Dzlieri, as though impressed by his size if not by his intellect. Schmidt ordered four double martinis, one each for himself and Lawrence and two for Magramen, whose capacity was in proportion to his bulk.

The talk and smoke were thick, and the three stood quietly drinking and batting back the greetings tossed at them while the press of great minds eddied around them.

Lawrence jerked a discreet thumb towards the densest knot at the end of the bar, from the midst of which boomed the ringing voice of Sir Erik Koskelainen.

Schmidt exchanged glances with the Vishnuvan.

Magramen said: "Now?"

"No. Wait till after dinner."

"They're goin' to dance, you know," said Lawrence.

Schmidt nodded. "Finish up, everybody. They're beginning to go in."

Under Schmidt's leadership they took places fairly well down towards the end of one leg of the horseshoe into which the tables had been arranged. One of the Institute's other two extraterrestrials, the reptilian fellow with the unpronounceable name from Osiris, took a place next to them. The e. t.'s always had a tendency to huddle together from lonesomeness at these functions. The other one, the tailed man from Koloft on Krishna, sat across the way.



**M**AGRAMEN pulled out two chairs to make room to curl his equine bulk against the table. Koskelainen, resplendent in the red-and-blue full-dress of a major in the World Federation armed force, sat at the head of the horseshoe, at the right of the director. (He must have a reserve commission, thought Lawrence; was this the proper occasion to wear it? He thought not.)

Lawrence reflected that on the whole the greatest minds in the Galaxy, as the Institute was intended to comprise, were not much to look at. They ran to baldness, thick glasses, and a doddering manner which made Koskelainen stand out amongst them like a sunflower in a coal-scuttle. As for their women, with a few exceptions, the less said the better. He gulped when he saw that Lícia sat on the other side of Koskelainen and was looking at him with every appearance of devotion. Beyond her sat Papa Ferreira and his Senhora.

As Institute dinners went, it wasn't so bad, especially when you considered that most of the members were notoriously indifferent to fine food, and therefore the management had no motive for laying itself out to provide a feast for gourmets. Lawrence hardly tasted his, however, what with the distractions of looking toward Lícia and wondering what Schmidt was going to do.

When it was over the director made a little speech introducing "the man who needs no introduction, our own Dr. Joao Ferreira, who will tell you about certain matters."

And Ferreira did: "—the Finance Committee has been so impressed by the proposal put forward by Sir Erik Koskelainen that we have accepted it in principle, leaving only details to be worked out. I now introduce our guest of the evening, Sir Erik Koskelainen!"

Lawrence exchanged glances with Schmidt, meaning: "So it's all decided already!" As he did so he observed that among his colleagues others likewise seemed astonished, even while they applauded politely. Lawrence thought, Like us, they're wondering if their own appropriations will be cut into. Of course if this gloop hires a lot of the Institute personnel to run his survey, it won't make so much difference.

Koskelainen himself was speaking, forcefully, eloquently, with flashes of humor and sly self-deprecation. And he

made it plain at the start that his project would make the maximum use of scholars and scientists already affiliated with the Institute. You couldn't help warming to the bird, thought Lawrence. He even had the grace to end his speech before anybody became bored.

Schmidt said: "Come on, Greg, follow him into the ballroom. Maybe we'd better let him have one dance, so there won't be such a crowd around him."

"Yeah, but he'll dance with my girl!"

"Well, whom d'you expect him to dance with? Ah—Magramen? Come along, old horse! You've eaten enough salads for one evening."

"Ain't that many salads," growled the Dzlieri, scooping up another fistful.

They straggled into the ballroom. Sure enough Koskelainen was spinning away down the floor with Lícia Ferreira, dodging through the Institute couples like a speedboat cutting through a lot of barge tows. The tailed man was trying awkwardly to dance with the director's wife, and Louis Prevost, dancing with Professor Saito's wife, was looking over her shoulder apprehensively at Magramen, as if wondering how long the Dzlieri would continue to behave himself.

Lawrence saw Schmidt timing the revolutions of the dancers about the floor. As the number ended, the xenologist said: "Come on!" and pushed towards Koskelainen, conspicuous in his finery. Schmidt said to Lawrence: "Introduce us."

"Hello, Sir Erik," said Lawrence. "I'd like you to meet a couple of friends of mine: Dr. Schmidt and Mr. Magramen."

Schmidt, shaking hands, said: "I don't think you remember me, do you?"

Koskelainen, all smiles, said: "Not off-hand, unless I ran into you at some meeting. I—" His voice trailed off as Schmidt removed his glasses.

Schmidt said: "I don't think you ever met Magramen, though you knew a lot of the Dzlieri on Vishnu, and he's known about you for a long time. Haven't you, Magramen?"

"Is sure thing," said Magramen, extending a hairy-backed hand. "*Chrdul karu uge dres, tsameskhmilma usuni otsnet djor?*"

"I beg your pardon?" beamed Koskelainen. "I'm afraid you've got me on that dialect, old man."

"Funny how soon you've forgotten it,

isn't it?" said Schmidt. "Listen again."

Magramen repeated his sentence. An interested circle of spectators had formed. Koskelainen frowned. "What sort of gag is this?"

"No gag at all. A few years ago you were fluent in Magramen's dialect, as you call it."

"O well, a man can forget!"

"That is, Koskelainen was fluent in it when he was on Vishnu. Suppose you tell us about your work on that stay? Especially since Magramen was there at the time, when the real Koskelainen visited the planet, so he can—uh—corroborate—"

"Say, are you calling me a fake?"

"Precisely."

"Why you—you Venerian mud-worm! I thought the members of the Institute were gentlemen as well as scholars. It seems I was mistaken. Good-night, everybody." Koskelainen shouldered through the circle of spectators.

**F**ERREIRA appeared with a stricken expression. "My heavens, Reggie, what have you done? Sir Erik, wait, wait! There must be some mistake!"

"Stop that guy," said Schmidt. "He's no more Erik Koskelainen than I'm Napoleon."

Lawrence pushed after the departing guest of honor. Magramen, clenching and unclenching fists with a gleeful expression, clattered behind him. By the time they reached the front door, pursued and pursuers were both running.

Magramen said in a disappointed tone: "If he get outside, I no can catch. Can't see in dark."

"I'll fix that," said Lawrence. "Hold still a sec." The young ecologist vaulted onto the Dzlieri's back. "Now, giddap, and I'll guide you. Hey, you!" This was to a startled bellboy. "Hold that front door open for us, will you?" He ducked through the door, thinking how lucky it was not of the revolving kind.

"Hang it!" said Lawrence. "The guy's got away—no, there he is! On your right!" He had glimpsed the gaudy uniform trying to slip out of sight behind some of the ornamental shrubbery ranged along the front of the Princeton.

As they neared the shrub, Koskelainen broke into a run and Magramen into a gallop. The savants were streaming out of the hotel now, and they gave chase too. However, their age soon left

them far in the rear, though the tailed man from Koloft did not too badly. Koskelainen ran like the wind, but the Dzlieri like the hurricane.

As Magramen overtook him, Koskelainen dodged. Lawrence, gripping the slack of Magramen's coat to steady himself with left hand, leaned far to the right and caught Koskelainen's hair.

Koskelainen jerked frantically and the hair came off with a ripping sound. Lawrence found himself holding a well-made wig, and Koskelainen's natural hair was seen in the light of the street-lamp to be the bright green of a Krishnan. Furthermore it transpired that the wig had included a peak of artificial skin coming down low over the forehead to hide the feathery antennae that sprang from between the Krishnan's eyebrows.

Magramen had skidded to a stop and whirled. Before the Krishnan could dodge again, the Dzlieri seized him and hoisted him high in the air.

"What you want me do with he?" said Magramen. "Can have much fun busting skull against an lamp-post, I think, yeah, huh?"

"No, just carry him back. Oh, here's a cop. Officer, will you pinch this guy?"

"Which one? The inhuman monster or the felly he's holding?"

"The felly he's holding."

"What for?"

"Well, impersonating a military officer will do to begin with. Here's Dr. Schmidt from the Institute, who'll tell you all you need to know about it."

Schmidt said, after getting his breath: "Guess I'll have to—uh—go to the station-house to comply with formalities. Where's the nearest one?"

The policeman gave the address of the Third Precinct headquarters. Schmidt said: "Greg, get the truck and drive Magramen down there to pick me up. See you in a few minutes."

On his way back to the hotel, Lawrence encountered Licia Ferreria, streaming along with the general rout of members and guests of the Institute. Expecting appreciation for the athletic part he had played in unmasking the impostor, he said: "Licia, I—"

"I don't care to talk to you, Mr. Lawrence!" And off she went, leaving Lawrence standing on the sidewalk with his mouth open.

He pulled himself together and led Magramen to the truck. Half an hour

later they picked up Schmidt. The xenologist exuded self-satisfaction, but Lawrence had his own troubles. "She wouldn't speak to me!" he moaned. "Wouldn't even let me explain!"

"Well, what d'you expect?" said Schmidt, lighting his pipe. "I suppose she'd fallen for this bleep, and you busted her illusion. You don't—uh—expect people to thank you for that, do you?"

Lawrence sighed. "I suppose not."

"Cheer up. Either she'll get over it, in which case everything'll be okay, or she won't, in which case you're lucky to escape such a dumb jane."

"Who was Koskelainen really?"

"Oh, that. Just a Krishnan named Chabarian bad-Seraz, a suitor for the hand of the only daughter of the King of Balhíb. All very romantic. The king wants to industrialize and arm his country and make a great power of it, regardless of Interplanetary Council policies. So he told this bird he could have his daughter and be his successor to the throne if he'd go to Earth and bring back certain things, like that fellow in the myths who had to get the golden apples and things. Herakles, wasn't it?"

"Yes, but what were the things?"

"Oh, first, a fund of technical information adequate to effect an industrial revolution. Second, a group of technicians to teach the Balhíbuma what they needed to know about science and engineering. Third, enough money to bribe any I. C. or *Viagens* people who might try to stop them.

"I think Chabarian underestimated the honesty of the I. C. and the *Viagens*, but you'll admit he was ingenious in carrying out the plan. For one thing he looked like Koskelainen, and for another he mastered the part of an Earthman almost perfectly. The real Koskelainen was never such a flamboyant character, though. If we take the heels of his shoes apart we'll probably find a whole technical encyclopedia on microfilm stuffed into them. And by getting this grant from the Institute and enlisting a flock of scientists for service on a far planet he hoped to accomplish his other tasks."

Lawrence said: "How did he expect to get past the physical examinations for *Viagens* passengers without being found out?"

"The same way he did on the trip in, I suppose. Money."

"You seem to know an awful lot about

this, Reggie. How did you find it out?"

SCHMIDT grinned. "You seem discreet enough. Can you keep something under your hat?"

"I guess so."

"Well, I'm really Erik Koskelainen."

"What?"

"Sure. Chabarian didn't know me at first with my glasses and whiskers."

"Tell me about it!"

"Oh, it's nothing much. When I visited Balhíb the king first tried to get me to help him with his scheme. When I wouldn't he threw me in the jug. Then when I pretended to fall in with it in order to get out, he wouldn't trust me. Instead he sent Chabarian to socialize with me. It wasn't for some time that I got wise to the fact that he was studying me in order to take my place. Don't know how he got to Earth—he must have taken a job at Novorecife in order to study human beings some more.

"Anyway I escaped from the king's cooler and came back myself. The king had treated me pretty rough so my nerves were shot, and I thought I needed a few months of some quiet job incog, and got this one. I'd told Chabarian about the Institute in the course of a conversation in my cell, so I thought he might show up here sooner or later. Then, when he did, I couldn't denounce him directly without exposing myself, but Magramen took care of that."

They drew up to the laboratory building and got out and let Magramen out of the truck body. Schmidt opened the door with his pass-key, and led the way down the corridor towards the Dzlieri's stall. Magramen clattered behind peering into the empty offices.

Lawrence glanced back at their companion and lowered his voice to ask a final question: "How did you get our equine friend to coöperate so nicely? Poor Prevost has been trying to for months without getting anywhere."

"Simple again. I knew what was making Magramen wild, so I promised him a beautiful blonde."

"What?" cried Lawrence with something like horror. "Jeepers, you can't! I mean it's physically impossible!"

"Can't I?" As they approached the stall a whinny came from within, and there stood a bay mare. Schmidt nudged his subordinate. "Uh—see what I mean?"

# THE READER SPEAKS

(Continued from page 9)

itually as well as physically. And the idea of mankind fostering its own evolution is one which not only equals the unfolding dream of space flight but is a necessary corollary to the coming spread of humanity among the other planets.

For if we go to other worlds as we are, we shall very probably destroy the entire Solar System!

## OUR NEXT ISSUE

**D**IRK WYLIE and Frederic Arnold Kummer, Jr., tee off in the lead spot of the February issue of TWS with one of the swiftest, most exciting and ingenious short novels we have had the privilege of publishing in some time. It is entitled **WHEN TIME WENT MAD** and from the opening paragraphs, when Webb Hildreth returns to his apartment to find a stranger awaiting him there, to the final page, when Webb is finally able to make his peace in a world as yet unborn, it should hold the fascinated and fearful interest of any reader whose pulse beats at more than a once-a-minute clip. This is a story that *moves*.

For Ron Dineen, Webb's uninvited visitor, is not only a stranger but a caller from the distant future. He is not only a caller from the future but is Webb's unilateral Mendelian homogenic descendant—in short, a throwback from time to come. And he is not only a throwback but a fugitive from a "Time of Troubles" calculated to give even Professor Toynbee the triple horrors.

Webb is naturally reluctant to help him but choice is taken out of his hands when Dineen's pursuers come inrushing into his apartment, forcing both Ron and himself to flee through time and, ultimately, to share their surviving body—that of Webb Hildreth.

It is their escape and ensuing troubles that disrupt the web of time itself, causing eras and eons to coalesce, to divide, to vanish in one of the most fascinating concepts of warped horology we have yet seen in science fiction. **WHEN TIME WENT MAD** combines action and intellect in a combination far happier than any of the tortured time-tracks it deals with.

Then too, Henry Kuttner rings a flock of bells in a brilliant and sardonic portrayal of alien form for future sociological and anthropological reference—a subtle and fascinating novelet, **THE VOICE OF THE**

**LOBSTER**. This is the story of Terence Lao-Tse MacDuff, a sorely perplexed and harried confidence expert of the interplanetary era ahead, a creature whose very human flair for larceny is matched by the inhumanity of his outer shell.

Terence, of course, is not actually a lobster—but what he actually is does not become evident until the very end of the story. Suffice it to say he is something utterly unexpected and something utterly delightful. You'll find out.

Those of you who have been asking for an early return of Leigh Brackett, along with other Brackettfaas, who seem to include most of the stf public, will welcome her return to these pages in a second novelet, **THE DANCING GIRL OF GANYMEDE**.

Here, in the story of a human who falls in love with an amazing android "girl" is a tale of imaginative high romance, of peril and of inevitable tragedy that is keyed to the deepest of human emotions. Again, it is swift and certain, yet always containing the promise of escape from the inevitable. It is one of the finest non-novel-length stories Miss Brackett has yet written in the stf field.

The short story, of course, will be in evidence too—and with such names as Bradbury, Hubbard, de Camp, St. Clair, Leinster, Smith, Hamilton and many others to draw from should hold quality as well as quantity. And we, poor wretch, will be present in the usual give-and-take. In brief, the next issue looks like a fitting start for a grand TWS year.

## LETTERS FROM OUR READERS

**A**PPARENTLY the science fiction fan club listings, which we have sought the past eighteen months to run twice a year—in the December TWS and the July SS—is a bust. At any rate we received only four requests this time out—and that is hardly enough to warrant continuation of the service. Unless there is a fanclub uproar over it, we have decided to drop the whole idea.

Meanwhile, the four who did—

EUGENE SCIENCE-FANTASY SOCIETY, 146 East 12th, Eugene, Oregon. President, Rosco E. Wright. Meetings, 7:30 P.M., the second Thursday of each month.  
OTTAWA SCIENCE FICTION SOCIETY, 115 Second Avenue, Ottawa, Canada. President, L. F. "Lew" Holland, 2 Huron Avenue, Ottawa.  
SCIFANS, 1308 Hoe Avenue, Bronx 59, New York. President, S. Serxner.



TUCSON SCIENCE FICTION SOCIETY, 807 East Pastime, Tucson, Arizona. President, Thomas E. Voorhees. Meetings every Monday from September through May.

Also in the mail are a trio of short takes, which we shall handle more or less en masse, to wit—

What's a "dietetic memory" (see TWS, August, 1949, Page 106, column 1, line 2)?

Actually, it was misspelled "dietic" and the actual word, as typed by van Vogt, was "eidetic." According to Webster eidetic means "an individual with unusually vivid mental images, which often persist and may sometimes be recalled." Blame it on the printer or the proofreader or ourselves. At any rate van Vogt had it right.

And Mrs. Paul M. Paswaters of 10200 Baraga, Dearborn, Michigan, writes—

Dear TWS Editor: As a new fan I would like to hear from the other fans. I enjoyed your editorial in TWS for August and THE READER SPEAKS was swell. I haven't read enough science fiction to criticize your stories—but I'll get there someday. So far I can only say I've enjoyed everything in your magazine.

A lovely missive—and the pity of it is that Mrs. Paswater will almost certainly acquire the knowledge she seeks and will soon be belting us over the head with cement balloons. But it's wonderful while it lasts.

And someone, initialed A. L. of Milwaukee 6, Wisconsin, has the following inquiry—

Dear Editor: Could you or anyone else tell me what other stories A. Merritt wrote besides the following. Would like to get them. Also would like the pocket edition of Face in the Abyss by Merritt, not the large size—

Creep Shadow Creep, Burn Witch Burn, Ship of Ishtar, The Moon Pool, Metal Monster, Dwellers in the Mirage, Seven Footprints to Satan, The Drone, Through the Dragon Glass, Rhythm of the Spheres, Woman of the Wood, The Fox Woman.

Frankly, we know of none save The Black Wheel, which, like The Fox Woman, was posthumously completed by Hannes Bok. Merritt's literary output, of course, was limited by the fact that he was the immensely prosperous managing editor of Hearst's American Weekly for decades and succeeded to the editorship on the death of Morrill Goddard. Oh, yes, there is one other, which we were recently called severely to task for omitting in a Merrittlist. It is a sequel to The Moon Pool, entitled Conquest of the Moon Pool. We hope some reader will tell you how to get hold of it.

And now, with the listings and postcards out of the way, let us to the heavier artillery. Mina McMahon's letter in the August TWS anent the Oregon Vortex, the Mt. Baker Ape Men and Napoleon's Dream Book seems to have stirred up considerable interest. Mrs. McMahon herself has contributed a folder from The House of Mystery (not the radio program of the same name, Johnny Griggs) in Sardine Creek, Oregon,

apparently the heart of the vortex.

The folder gives driving directions for reaching the Vortex, which is, it says, "a spherical field of force, half above the ground and half below, and, by reason of this, the affected area is a circle." Apparently everything within the area, including humans present, leans noticeably toward the North Magnetic Pole, even when apparently standing upright.

We'd like to see this for ourselves. It is located just off route No. 99, between Medford and Grant's Pass, Oregon. Further comment on the wonders described by Mrs. McMahon is provided in—

## HERE'S THE DOPE by Manly Bonister

Dear Ed: You can pull up your proverbial pants now—here's the dope on the Oregon Vortex.

About fifteen years ago, as I was engaged in pursuit of certain literary research on the subject of Oregoniana (did you ever see such a hell of a word?), I ran across this touted "Vortex" in the nature of certain alluring invitations (advt.) that tantalizingly described a most unusual spot upon the face of the earth—a spot about 50 yards or so in diameter, more or less (let us be accurate, by all means!)—in which up is down and vice versa, and mules respond gee when you yell haw. In short, it was said (in the circular) that normal laws of nature reverse themselves and stand up and do tricks within the mystic circumference of this vortex, and the only cost was two bits to come and see for yourself.

Well, sir, I discovered in the course of research, that not everybody agreed as to the alleged properties of the so-called Vortex. Unscientific observers, having paid their respective two bits for proving the spiel, swore that within the circle they climbed downhill, rolled uphill and stood at a slant. It was further claimed that if you hung a plumb line within the periphery of the magic circle and another without and sighted along the two, the plumb lines hung not parallel but crossed each other.

Scientific elements investigating would not certainly say that any of it was true and largely agreed it to be optical illusion.

Fact of the matter: A tumbledown shack rested on a steep side hill. No level territory any place for the observer to get a bearing. (Wonder if that same shack is still there? It was in lousy shape fifteen years or so ago.)

Consensus: There seemed to be a slight deviation of the perpendicular at that particular spot which might or might not be. Could be the aforementioned optical illusion—it could be a large amount of meteoric or magnetic matter buried in the mountain that actually drew the gravitic lines (?) slightly out of plumb. You paid your money (two bits in this case) and took your choice.

The general effect of the Oregon Vortex upon the public (until revived by the Lady McMahon) has been a loud yawn. In a country where it's so mountainous you can't tell up from down anyway, what's the difference?

As for the "newly located accompanying four fields of counter force", never heard of 'em, having been divorced from the state of Oregon, lo, this past decade.

As for the Mt. Baker Ape Men (as well as the Mt. Shasta Ape Men or High Priests of Gung, or something reputed to live inside the volcano), everybody in the Oregon Country has heard of them. They keep coming back . . . like bad pennies. Have you heard of the terrible characters that dwell in the waters of Crater Lake? Of the Beeswax Ship? Of the massacre at Chinaman's Creek? Or of the time some heroic character in a barroom brawl permanently branded his opponent on the seat of the pants with a hotstove lid? It's all a part of Oregon History . . . very interesting and not very well known.

Here is something for Lady McM. to try on her extra-normal perceptions. When I was very young, my daddy was a logger, and as a consequence, I spent a great deal of time in the deep woods of Oregon—where the coyotes howl and the wind blows free among the pines. When, on a stormy night, the Swedes and Poles and Italians and Germans and dozen other nationalities that loggers were in those days, gathered in the bunkhouse, I'd hop along to listen in on magnificent yarns of Paul Bunyon.

They were told with a zest and punch that has never been equalled by their highbrow literary counterparts. Those stories, couched in the rough language of the logging camps, were filled with wondrous and stupefying things. And when the big old Swede spread his arms out wide and solemnly stated that Paul's Big Blue Ox, Babe, was so wide between

the horns it took two men and a boy, taking turns, to see all the way across, I actually believed there had been such a critter.

Since then, though, I think I've gained a broader perception of things, and have come to realize that there is, to coin a phrase, a wide line of demarcation between them things as might be and them things as is.

It wouldn't be nice to end this without saying something real, mighty pleasant about your book, Mr. Editor. I buy my copy . . . regular.—1905 Spruce Avenue, Kansas City 1, Missouri.

A nice letter, if a bit on the agnostic side, Manly. Thanks for writing and sending it our way. And now for some further theorizing, to wit—

## NO WONDER

by Emily A. Thompson

My Dear Editor: Would like to give you some asked for information in regard to letter from Mina McMahon in your Aug. 49 iss. of TWS.

The so called Oregon Vortex was put into the spotlight about 20 years ago by the Oregon & Portland newspapers, who featured same. It centered mostly in a cabin and its immediate surroundings, where the laws of gravity didn't seem to work. Water was alleged to run uphill, and people entering the cabin had a sense of instability. Several investigations were made, as far as I know, and then the case was forgotten.

As for the Oregon cave monsters, they may have been bears the campers encountered, or tramps or prospectors, who had neglected to get a shave and haircut for any amount of time. They or it were described as "Shaggy Brutes." No wonder the Indians answered in the negative. They are inclined to disdain fantasy and look upon things as they are.

The so called "Oraculum Napoleonum" or Napoleon's oracle are several in number, all differing a little in regard to the question and answers. Doubtless Napoleon consulted one before the battle of Waterloo, hence the defeat.

The method consists in marking five rows of dots and as they come out, even or uneven, a sort of pattern is made and for each pattern there is an answer. It is quite an intricate, yet easy-to-master method. The only fault is that it doesn't work.

The books were printed in the '80's I think. I have one old copy coming down through our family. It would take too much space to describe the exact method, so I'll not try to.

I must differ with the lady as to the ability to soar above mundane facts. That's O.K. in fiction, but not so hot in describing factual happenings. Doubtless the people describing the Oregon Vortex and the meetings with cave-men or Ape-men had an inborn tendency to soar above the mundane—like in perpetrating a hoax.

I say, let us have plenty of imaginative fiction, but in describing facts, let us stick to reality.

As for TWS, it is my favorite mag as is SS. Those mags are real good. I am a member of several Stf. clubs and most of the members like your mags.

Is there such a person as an "extra-normal"? The psychiatrists have a name for it. A man or woman may be extremely realistic and yet enjoy an Stf. story with keen appreciation. Is it not intriguing to think of an "extra-dimensional space"? Yet we must also stick to facts in our common paths of life.

I think that "Amphiskios" is one of the most intriguing stories I ever read and should like to have the author write us a bigger novelet in same style. It is far the best story in this issue.—3963 NE. 9th Ave., Portland 12, Ore.

More grains of salt—or should we say a dose of same? And here is more comment on the intriguing Northwestern phenomena by a shy lady who prefers to hide behind an alias.

## SASQUATCH

by Anne Clare

Dear Sir: In your last issue I noticed a letter from Mrs. McMahon, asking for information on the Ape Men as she called them. I assume she is referring to the same legendary beings the Coast Indians of B.C. refer to in their legends as the Sasquatch.

These beings are supposed to be about eight feet tall, hairy, something like a bear, dark and shaggy and are supposed to inhabit the mountainous country around Harrison Lake in British Columbia. If I remember correctly the Vancouver newspapers have carried articles about them (they are treated scoffingly as a figment of imagination and any Indian who reports seeing one is usually assumed to be over-

imaginative). However there is such a legend and I remember that Frances Dickie wrote a story based on it about fifteen years ago, called "Altar of the Moon" and the locale of the story was Harrison Lake and its surroundings. The story was printed in the National Home Monthly, I believe, and ran as a serial.

If you use this letter please give it the Anne Clare alias as my family would laugh if they ever knew I wrote to the editor of a science fiction mag.—Squamish, British Columbia.

We don't know that we approve of your family, Anne. But perhaps it is the effect of their environment. Does living in Squamish make them squeamish or what? It seems probable at any rate—at least as probable as the Sasquatch. We're inclined to be a trifle bearish on the whole business.

Incidentally, it is not Frances Dickie but Francis T. Dickie, who probably knows the Canadian West as well if not better than any living author. Kidding aside, thanks for writing us—and please do so again, family notwithstanding.

## A BELIEVER SPEAKS

by Frederick G. Hehr

Dear Ed: This time you are in luck. I have been a reader, off and on, of TWS & AS since the early days of, heck—what's his name?—in the late Twenties. And I was not hengenue then.

You ask about those vortices which dot the West Coast and were first noticed near Gold Hill, Oregon, as mentioned by Mina McMahon. Heard first about them during the war, when investigation was impossible. Since then I have investigated a number of them and learned quite a bit about them. As an engineer of many years standing I also had the equipment to check rather thoroughly on the phenomena. If anyone in the East, who has never seen one, tries to tell you that it is all done with lines etc. out of plumb, tell him to make some tests first as I will describe them.

First, these vortices are not unique, as at first thought. Here on the West Coast they exist in two parallel lines about 200 miles apart on which they are spaced about 50 miles from one another. Except in certain places, such as the Ojai valley, they are grouped in patterns only a few miles apart. I know of one in New Jersey and of 3 in England.

More are probably known to local people, mainly because birds avoid them completely. So the one in N. Jersey was found when the Army tried to set up a unit for carrier pigeons on that spot. It just didn't work. The pigeons lost all sense of direction and never found their way home again, even from a hundred yards away. But space-ships seem to use those here on the Coast as beacons as too many are seen following the one or the other string.

These spots are usually about 150-200' in diameter. With a border which can be located within an inch. Even if the circle seems to jump about a bit once in awhile. Inside this circle many strange effects can be found. The best known is where two people stand about six feet apart and the one on the left seems to be at least a foot taller than the one on the right—assuming that outside both are of the same height whilst the platform on which they stand is perfectly level. (The greatest error I ever found was a difference in altitude between two platforms the thickness of a 50 cent piece.

Others are where a stick balanced on its end and a plumb-line alongside show several degrees difference. Where a ball thrown straight up comes down 6'-10' away and where one has to throw the ball as if against a wall to have it come back to the hand. When one walks normally on a level piece of ground but on walking backward can break ribs and neck if not caught. Where a ball, cigaret or pencil put down on a perfectly level plank will roll with a steady speed in one direction only. (Without any acceleration!) Where a line surveyed thru one of these places may show an invisible dogleg of up to ten feet, driving the surveyor crazy (that's how most of them were found).

And the test I always apply—the pendulum. A 2' pendulum swinging on a scale will swing normally in one plane. At 180° the pendulum will swing at least twice as far on one side as on the other. The scale being of course centered with the pendulum at rest. If one stands stiff and relaxed on certain lines one swings back and forth in an invariable rhythm. The time of which is different with each vortex.

Their origin and purpose? My guess is that an older race, probably from another planet, planted certain machinery there for their own purpose. I would strongly advise against anyone trying to dig it up. One of our A-bombs might

appear squiblike against it.—900 San Vicente Boulevard, Santa Monica, California.

Well, we have yet to see a space-ship but we hope to before we die. And thanks for expanding the vortex business so fully. We hope to hear more on this matter. Students??????

## WHO'S GOT CORPUSCLES?

by Rex Ward

Dear Editor: In regard to the August issue of THRILLING WONDER STORIES, I must say that there was only one good story in the issue. The others weren't too bad, most of them, but they were far below normal. Leinster's story surprised me in that it dealt with such an old theme—man-into-smallness. I was very disappointed with FURY FROM LILLIPUT. The basic idea was old, the supposedly "new" angles seemed 'rehashes themselves and the plot was very dull and transparent. By transparent I mean it was easy to see what was going to happen and how. A little of the science theories were all right.

It certainly is difficult to believe that the same man wrote this as wrote THINGS PASS BY. Leinster is a versatile man—not only in that he can be good sometimes and bad sometimes but in that he can write several different types of story all with the same skill. Incidentally—and this is just a good-natured poke at you—be careful what you say when you told me, "And Leinster certainly never had anything to do with the Black Bat."

I can prove that he did. Of course, the trick is, the Black Bat I'm thinking about is not the Black Bat which is currently appearing in BLACK BOOK DETECTIVE. Perhaps you didn't know that there was once another Black Bat—back in 1933—and the author was none other than Murray Leinster.

But to get back to THRILLING WONDER STORIES for August, I was disappointed with Bradbury's story. That is unusual, for generally I start a Bradbury story pretty sure that it'll be no good and as a result I'm not surprised when it turns out to be that way. But this time it was so much worse than even I thought it would be that I was let down. In my opinion, THE NAMING OF NAMES was nothing more than a rehash of THE MILLION YEAR PICNIC.

I don't believe I'll do much commenting on the other poor stories in the issue other than to say I was tremendously disappointed by van Vogt's story and that MacDonald's story started out well but the last half fell flat. I do want to mention Bill Temple's yarn, though, and compliment him on it. It was the only good story in the magazine. The idea was novel and the development of it very nice.

An interesting sidelight is the possible ramification of such a circumstance as was propounded in the end. The man knows that his son is the reincarnation—so to speak—of his philosophic friend—the son of course does not know this. His thoughts are like those of Mick but he does not know that he is, in a way, Mick.

On the other hand Mick knew that he was going to be killed. He knew also, apparently, that he was going to be "re-born" as the baby. In such a case it would seem that the baby would know he was Mick. But there wouldn't be much use of Mick dying if that was the way it was.

See, it provides some interesting problems—even a semi-paradox of a sort. But I liked the whole thing. The matter of the dates was surprising—almost enough so to make one half-way believe in what Temple is saying. At any rate, it was a good idea and a good story.

I was interested in a sickened sort of way in the letter from one Dirk Schaeffer from Alma, Michigan, in which the writer tried to compare a Bradbury story to a Hamilton story (Come to think of it, that's one reason why this issue was poor: no Hamilton story). I can think of nothing more inane. I was pleased at the way you told him he was all wet, so to speak.

Of course, I'm prejudiced on Hamilton because it was his Captain Future stories that introduced me to science-fiction. The grand old Captain Future—he's ridiculed now by a good many. Sure, he belongs to another era in science-fiction. But in his day he was a leader. Just as the old Model T, which is scoffed at today, was a magnificent thing in its day.

I didn't expect you or anyone else to agree with me when I said in my last letter that length was necessary in a story. I guess I'll have to do a little retracting of that statement. A story can be good and it can be complete and still be short, but what I really meant was that most ideas cannot be developed completely and thoroughly except when much length is given to them.

You gave O. Henry as a logical example of a writer who has become great through the use of brevity in his stories. But O. Henry didn't write for the idea of the story itself, but for the trick ending. Most of his short stories were really what might be called tours-de-force and not stories. A real story must contain an idea and an idea, if it is worth being presented, is worth a lot of time being developed to its fullest possibilities.

You said that many a story has been ruined being padded to overlength. That is, of course, true. But the chances are

that it wasn't worth being written in the first place or that it wasn't really an idea anyway. I'm not saying that short stories are no good. All I'm saying is that most ideas should be given a lot of length. Temple's story in this issue was a good example of a short story with a real idea that was developed quite fully in a short space of time. I actually do think, however, that added length would have improved this story.

It is in the field of music—symphonic music especially—that this "rule" holds true almost without exception. I believe as does Dr. Howard Hanson, the eminent American composer and conductor, that there are essentially only two types of music—warm-blooded music and cold-blooded music.

The terms are self-explanatory but briefly warm-blooded music simply means music which delves deeply into a certain emotion, such as love or grief or sadness. In writing warm-blooded music the composer puts his heart and soul into his composition and it is invariably necessary that he be himself concerned at that time with the emotion he is portraying.

It is also necessary, in my opinion, that the musical ideas that go to make up warm-blooded music be given great length in which they can be unfolded and developed completely. Because there are always a great number of side-lights to any idea that, if the idea is going to be developed fully, must be explored and understood, or at least recognized, if not themselves developed as is the idea of which they are a part. People have disagreed with me on this, but I think that a brief glance at facts will bear out my belief.

Tchaikovsky certainly wrote warm-blooded music. His last three symphonies tell of a single man's tragic and futile fight against inexorable Fate. They run about 45 minutes each and this is considered a long work. The symphonies of Jean Sibelius tell of mankind's struggle and ultimate triumph over Fate. His first two symphonies run over 40 minutes.

In his third it is interesting to note that he purposely attempted to portray the same feeling in the shortest possible manner. The third symphony runs only 29 minutes and although the thematic material is necessarily more abrupt and the more tangible matters of instruments—the lesser number—the work achieves the same atmosphere.

This is the shortest symphony that actually succeeds in portraying what the longer ones do—aside from the unnaturally brief Unfinished Symphony of Schubert—that I know of. As you know, modern composers of symphonies such as Harris, Randall, Creston, etc., are very brief. Their music is not warm-blooded. Hanson's Second Symphony—the Romantic—is warm-blooded (as a matter of fact it is from comments the composer made concerning that symphony that I draw that term) and it runs a half-hour.

Of course, the nine symphonies of Gustav Mahler and the nine of Anton Bruckner cannot be surpassed insofar as length is concerned and depth of expression. Mahler's symphonies run to such extreme lengths as almost an hour and a half. I think a composer needs this much time to develop fully his ideas.

Before the era of "warm-bloodedness" came the formal classicists, Mozart, Haydn and their brethren. And their music cannot as a whole be said to be warm-blooded and can as a matter of fact be best described as cold-blooded. The lengths of their symphonies? Rarely over 20 minutes, often as low as 7 minutes. Why? They didn't have real ideas to express. Their only purpose was to provide a few minutes of pleasant listening. Of Mozart's later symphonies, this is not true.

So I still say that, in most cases, length really is necessary for—not success—but thoroughness of expression. Your mentions of Ravel and Debussy bear out my statement. They never delved into them—had they done so, they would not have been impressionists, and their works would have been longer.

It is largely a matter, as you said, of what the author wants to tackle. But I would say that it would be more accurate to call it a matter of what the author can tackle—of what he is and what he has the ability to express.

In closing, I'd like to compliment you on your cover; it was perfect this time; I like that type very much. Also I'd like to see more Rog Phillips stories—305 East Maple Avenue, El Segundo, California.

You, it would seem, run to length in letters too, Rex. Pardon a certain amount of cutting but after all—!

None other than Murray Leinster himself called us to task on the Black Bat matter—he got a laugh out of our erratum!

Temple's A DATE TO REMEMBER hit us where we live. We were born within a very short time of Mark Twain's death, April 28, 1910, and have always affected to believe this fact alone a thorough disproof of the reincarnation theory. But all the same—it gives food for thought. Are you



there, Huck Finn? You can have your old paradox and eat it too, Rex—with or without truffles.

We'll soon discover just how dated Captain Future is. Curt Newton and his team will reappear in novelet form in the January, 1950, **STARTLING STORIES**. Yes, authored by Edmond Hamilton and entitled **THE RETURN OF CAPTAIN FUTURE**. First of a projected series to run regularly in **SS**—or at any rate until the readers scream, "Uncle!"

We still are in the mood to make a horse-race out of your strength-through-length theories of musical and literary art—it is differences of opinion that make the ponies run, is it not?

Very well, if your idea is correct, then long pictures should be better than short ones—the same for long statues. And the Iroquois Long House should be the quintessence of human architectural achievement. Incidentally, we prefer the intellectual approach to problems of the intellect, be it ever so cold. Your so-called "warm-blooded" work has always seemed excessively juvenile. But so what—it's a horse race, isn't it?

Well, one man's Grieg is another man's Katchaturian. Selah and thanks.

## **OH, ABSOLUTELY** by Bill Case

Dear Editor: I have before me the August issue of **TWS**. **AMPHISKIOS** is the only story in it I have so far read (bloody but not bad), though I have thoroughly devoured the editorial and letter section. 'Tis this which prompts me to write.

Firstly I would like it known that I am chief prophet for a thought new in philosophy and I am now and again intrigued by your editorial endeavors. Your interest in it is reflected in the format of **TWS** and **SS**. The flavor of the stories, the mood, the type of correspondence in your letter departments—all lend an odd appeal which is hard to describe. No other magazines have it.

I think the answer is that you use the philosopher's tool, synthesis, more than the scientist's, analysis. That is, your writers deal more often with the vaster forces and entities of space, time and existence in broad sweeping progressions rather than with the painstaking breaking down into even finer component things which are but components of much larger elements themselves.

This latter attitude is necessary to scientific progress but it lends little if anything to philosophic progress (well, hell that's a badly untrue statement, but maybe you get the drift of what I'm driving at).

As for you, Ed., I wish you would toss around the word "absolute" a little less freely than you have been. Referring to one of your editorials of a few issues back (perhaps in **SS**) you refer to "absolute truth" as if it existed in fact and but for the failure of a few national or political groups to recognize it as such we would be all living in the millenium. Just give me a hint, Ed. What is it?

As a matter of fact, name me just one absolute. I don't mean something that you personally accept as an undeniable fact, but something which is beyond question a fact under any circumstances and for any person. This brings up relativity you say? You are so right. And did it ever strike you as obvious that any acceptable new philosophy must be grounded upon some relative principle. It is either this or fall back on an absolute—which doesn't exist.

So, insofar as we humans are concerned, there is no alternative. It is odd that no workable, believable system of metaphysics has been evolved out of this clear-cut situation. Such a system, to be worthy, must afford what is required of any acceptable philosophy—meaning for humans and a guide for humans.

In addition, in order to avoid the error of dogmatism, it must allow in its structure the realm of the non-human, the

super-mundane, the unknown—the amorphous future from which we mold and fashion our present. There is no room for an absolute here excepting absolute uncertainty, unchanging change—in other words flux, relativity.

Well, there's no room in your letter section for the exposition of my position, but the above gives the clue—it is the idea from which I start. Every philosophy, every religion in the history of this world has started with at least one postulate—a given premise for which no proof is possible.

My philosophy is founded then upon that fact—that certainty does not exist, that there is no absolute, that everything is uncertain, even my philosophy. And if that seems like double talk you'd better think again. There is a principle of relativity here which, while seeming to undercut the very basis of my position, actually gives it the strength of an absolute—without being an absolute.

Enough. For any who doubt or would argue or seek clarification, drop me a line. I am in the market for disciples—cohorts rather.

Oh, that blue fist on that yellow background! Bergey, thy name is madness!

Also, though I haven't as yet read the story called **FURY FROM LILLIPUT**, please give us no more of these. No matter how well developed, no matter how well the tale is spun, the basic story idea of the human beings reduced in size and their battles for existence in what was once a very ordinary world—this idea, I say, is terribly hackneyed.

Milt Rothman really had you over a barrel on your science, hey? It's refreshing to run smack-dab into someone like Rothman, who brooks no hocus-pocus nor doctoring of facts (facts as generally conceived, that is). Two of the ladies, Miss Gay Mottley and Mina McMahon, have concocted memorable memos to Ye Ed. Superior.

May I be different? I hate Bradbury. The juvenile (nay, infantile) antics of his characters lead me to suspect that Ray's age cannot be more than 12. Or better still, his stuff is ghost-written by a 12-year-old. Needless to say, if someone else were to submit the kind of drivel he specializes in you wouldn't give it a reading beyond page 1.

I well remember the Brett Sterling incident. Was that **TWS** or **SS**? How about running all of Bradbury's stuff under different pen names for about a year. Then let's see where his name ranks in **Stfl Sure**, he's written some good stuff. The records prove it. But there's darned little of it. I wonder how much longer his rep will keep him up on that pedestal.

Good heavens—another Oona and Jick! Wait a minute . . . there now, my trusted scissors have just removed that obnoxious section from this otherwise quite presentable magazine. Have I seemed overly critical? Don't be fooled. **TWS** and **SS** are far and away the best mags in **Stfl** ever published. Keep it up.—54 Indiana Avenue, Fort Thomas, Kentucky.

You want an absolute—"something which is beyond question a fact under any circumstances and for any person"? Well, we can think of several, but they are hardly printable functions. Actually, your philosophy based upon the immutability of change itself coincides very closely with our own—we might almost say absolutely but we won't.

As for the Bradbury-Sterling issue—it was **TWS** for October, 1948. And we heartily disagree with you on the subject of **RB**. And don't you be fooled for a moment, Bill—we liked your letter.

## **TUPPENCE** by Gwen Cunningham

Dear Editor: As your favorite (I hope) subscriber, I am throwing in my two-cents' worth again to tell you Leinster did a good job on that "Lilliput" story. I'm a sucker for Lilliputian themes anyhow, perhaps because I'm not so small as I once was, alas! Also, the artwork on that story was exceptionally fine.

**LION OF COMARRE**—well, the story was all right, I guess. Only it didn't really get anywhere after all and besides I felt a distinct tack when the only love scenes were between the hero and a very improbable lion.

I got a bang out of **AMPHISKIOS**, all right, and the only fault was that it didn't ring true at the end. It was all too pat and trite—and convenient. Not enough like the facts of life as I know them. Things just don't turn out that way, I'm afraid. But I imagine that is deliberately slipped over when the happy ending is at stake.

Actually I'm not sure I don't really prefer the happy ending. Perhaps it was the solution that spoiled it all. Why couldn't it have worked itself out some other way, letting



the four principals win out over terrible odds with the help of the thrilling dark-eyed warrior (Wowie!)? Oh well, it was a good idea and a good story on the whole. I fell for that warrior myself—did you know it? (We have a pretty good idea by this time—Ed.)

FREE LAND was something to read anyhow. Much better than biting my nails.

PROJECT SPACESHIP was a very good and interesting idea, especially since it is a project that is closer than most people realize. Van Vogt is a fine and understanding writer. It was easily the most honest and worthwhile story in the issue, chiefly because vV had the insight to write a tale that is almost true already.

And it doesn't hurt the story any that he is able to humanize his characters into understandable people with whom we can sympathize even despite their faults. Never, never, lose van Vogt. He's too good to lose.

SALVAGE was fair, A DATE TO REMEMBER good enough. And I can't help admitting I enjoyed St. Clair's NEO GEO-DUCK. I like Oona and Jick just because they're so different and laughable.

Bradbury's NAMES story was a little off the beam. I like his writing but the story was either too incomplete or too eerie to hit the spot with me. But don't get me wrong. Ray is all right and, though he has done better. NAMES was well worth reading.

I might add I still adore THE READER SPEAKS. I read it first and re-read it last. It's the best letter department in the field. On the whole, fellows, I'm proud of you!—8519 MacArthur Boulevard, Oakland 5, California.

Gwen, you're kidding about the LION and AMPHISKIOS—we hope. But if you aren't we shall forthwith order Arthur Clarke to have his heroes play love scenes only with lionesses hereafter—and if you want those other crumbuns to survive in the MacDonald opus, you'll have to write your own version. But just keep on adoring TRS and all will be forgiven. Write us again—and soon.

## WHY AND HOW?

by W. Paul Ganley

Dear Editor: I loved THE LAWS OF CHANCE. I lapped up MAN IN IRON CAP. I drooled long, happily, over BLACK GALAXY. Ditto the POCKET UNIVERSE trilogy. I stood Murray Leinster's bad shorts and reread his good ones. BUT—

WHY and HOW did FURY FROM LILLIPUT get into TWS? In fact one might almost inquire—how did it get written? Perhaps if it had been lengthened into a novel for SS and had been carefully written, it might just possibly have been acceptable. But, I'll bet the only reason Leinster even wrote the story was for the check. Hmmm—why does any author write a story; except to provide us hacks with an excuse to send a missive to pore-old-editor-anonymous?

Luckily, Murray Leinster composed his allotted "bad one now and then" at a time when the companion novelets were above par.

The finest—perhaps the most well thought-out—was John D. MacDonald's AMPHISKIOS. I expected a bit more than I got, in the end, but it was still the best of the lot. Second was THE NAMING OF NAMES, a mood-tale which needs no praise. Bradbury's short does not place alone but occupies second position with A DATE TO REMEMBER. The latter, if all of the dates are genuine (and I see no reason to doubt them), must have required a horrible lot of research. It was the plot, rather than the style, which placed this story—unlike Van Vogt's novelet which takes fourth, and THE LION OF COMARRE, which captures fifth.

FREE LAND also deserves honorable mention. But hold! FURY FROM LILLIPUT does not exist in the cellar after all—that dishonorable position is taken up by one Mrs. M. St. Clair, which should stick to detective story writing and leave the science-fiction field to AUTHORS. I do not deplore her work (huh?), but her plots. SALVAGE may be mentioned as not belonging in your mag.

Which takes care, nicely, of this month's crop of stories. Now—

THE READER (that's me!) SPEAKS.

TRS gave me the biggest surprise (and laugh) in the last few millenia. For the life of me, I can't possibly see how anyone could see any similarity at all between CONQUEST OF TWO WORLDS, and AND THE MOON BE STILL AS BRIGHT.

You can no more compare the two than you could THE MILL ON THE FLOSS with a "Saint" story. But, surmounting this difficulty with blind bull-headedness, what happens?

Item 1. Granted. The plot is one man's fight for what he believes right. Isn't that just about the most important fundamental point of almost every adventure story? Look at THE MAN IN THE IRON CAP, as one example of a man

fighting for what he believes right, only to become disillusioned. I refer, of course, to the leader of the Security board.

Item 2. I dare you to look into any science-fiction magazine without finding a story about a world being invaded by Earth's forces (especially if, like SS and TWS, the mag prints Bradbury stories).

Item 3. The hero's lifelong friend turns to the enemy. You must have been reading American History—remember Benedict Arnold?

Item 4. "The ending of both stories is the defeat of the enemy." I contend that almost every science-fiction story embodies such an ending. After all, if it didn't it would be more or less of a horror tale.

I can't understand why Dick Schaeffer (a synonym for "Richard Shaver"? ) chose AND THE MOON BE STILL AS BRIGHT for comparison with World-Wrecker Ham's story, when there are so many other tales which actually are "copies" of A CONQUEST OF TWO WORLDS. Perhaps he wanted to prove to us that no matter how different two individual stories are, they are still alike in many respects. I'm surprised he didn't claim plagiarism because both stories contained people.—119 Ward Road, North Tonawanda, New York.

A bit venomous toward Leinster, St. Clair and Cartmill, to say nothing of Dick Schaeffer—but then, we were a bit venomous toward Mr. Schaeffer ourselves, unless memory fails.

## SHADES OF LONGFELLOW

by Don J. Nardizzi

Dear Editor: Hi-ya, Hiawathal  
By the shores of Thrilling Wonder,  
'Neath the Shining, lurid cover,  
Dwells the patient, heckled Ye Ed,  
Son of Science Fiction, Ye-Ed.  
Man of fortitude and sorrow,  
Who withstands the slings and arrows,  
Of outrageous readers' letters,  
Smiling, smirking, frowning, weeping.  
Gray before his time this stalwart,  
Sits among his guests assembled,  
Guests in form of praise and sniping,  
From the missiles thick about him.  
From the Arts he makes him covers,  
Puts the light side, bright side outside,  
From the mailbag shouts a critic,  
"Put the gay side, Fright side INSIDER"  
"Put the gadgets, rockets outside,  
"Put the gaudy female inside.  
Spread the suns and planets outside,  
"Show the warm side, bright side insidel"  
Speaks a paying guest from Kansas,  
"I adore your belles and monsters!"  
Speaks a warrior from the Southland,  
"Get your gaud Dames off the cover!"  
And he weeps, our strong heart chieftain,  
When he reads, from Sacramento,  
"Your last issue was a stinker!"  
But from Brooklyn comes a "Splendid!"  
Come the bouquets from Altoona,  
Come the brickbats from Chicago,  
Comes the paddy-wagon screaming,  
Takes our gibb'ring sage and copy.  
And he takes the noble MS.,  
From its skin he makes him novels,  
Makes them from the start to finish,  
Brave new prophets of tomorrow.  
And he takes the fanzine issue,  
Takes the fan club billet-doux, too,  
And he blows upon their spirit,  
Blows the fan-fare of their spirit.  
And so let us, guests assembled,  
Show our gratitude anon,  
For Ye-Ed, whose constant vigil,  
Gives us fare to feed upon.

Any questions?—5107 Delaware Avenue, Los Angeles 41, California.

Hi-ya, Donald J. Nardizzi  
Iowan (?) from Angels' City  
Though your rhyme be slightly dizzy  
Dizzy, tizzy, more's the pity,  
From the teepee on Manhattan,  
Twixt the rivers East and Hudson  
Where ye Ed does all his tattin'  
All his editorial tattin'

All his flattin', blattin' tattin'  
 Comes an iron-horse, stout and sturdy  
 Crossing mountain plain and river,  
 Wheezing like a hurdy-gurdy,  
 Precious message to deliver  
 From the iron-horse to a flivver,  
 On which U.S. Mail signs shiver  
 Shiver, quiver, jar the liver.  
 Sachem Ed thanks Don Nardizzi  
 From his 1400 teepee  
 Thanks him for he's very plizzi  
 Unto point of being weepy  
 For his sympathy with scallions  
 Scallions tossed by fan rapscaillions  
 Evil little fan rapscaillions  
 At ye Ed's—

Oh, Pleistocene—let's send the whole thing Air Mail!

## HELLO YOURSELF by Ruth Weinstein

Dear editor: Greetings, salutations, also Hello! My husband says—if I had my way I'd live out in a barn somewhere so that my precious collection of science fiction and fantasy would have plenty of room to grow hale, hearty and undisturbed—in our apartment.

He's hit the ceiling so often of late (our ceiling has dents to prove it) because of the space situation (not outer space—just ordinary prosaic closet space) that I've finally decided to dispose of my carefully hoarded mags.

There are 131 magazines and books—Merritt's "Conquest of the Moon Pool" and "Ship of Ishtar" and Serviss' "Second Deluge" are included among many others. Will anyone interested please send a stamped, self-addressed envelope for more detailed information or call EV 4-0140 if in the neighborhood.

While I'm at this let me put in a plug for my favorite authors and artists. Virgil Finlay is simply out—way out of this world. He's so wonderful! I do portraits myself—but there's not even an atomic bit of professional jealousy involved. He's too good for me to make comparisons. Lawrence and Jones are all right too.

As for the authors—I'll take Merritt, Burroughs, Haggard, Blackwood, Bradbury, C. L. Moore, Bloch, Chambers and, for sheer poetry, give me Frank Owen. All fellow hero-worshippers will now join me in a resounding amen.—221 Ten Eyck Walk Brooklyn 6 New York.

Why not put some fly paper on the ceiling so that your husband will stick there the next time he takes off, Ruth? Then you won't have to sell your collection. The cryptically self-initialled A.L. of Milwaukee 6 should be interested in your "Conquest of the Moon Pool." Perhaps he will send you one of those requested envelopes.

## FLANG AT by John Van Couvering

Inconsistency, quotha! That was the word you flang at me, OUTLANDER #1, and all the other people who had the apparent misfortune to be in our "nebulous" organization at the time aforementioned literary effort was delivered.

Listen, pot, who are you calling sooty?

In FURY FROM LILLIPUT, seventeen sheets of befouled pulp inserted in the Aug (or is it Agh?) spasm of TWS, we find that the—ahem—ensmalled objects return to ennormalled state after being enburned or even slightly en-toasted. Presuming that the villain had his hand on the shotgun, when towards the last he was twirling the beads of sweat on his greasy upper lip and preparing to rain all over the hero, why were the shreds of villain (we at this point timebind a bit, skipping the gory details) not ennormalled along with the gun fragments?

Leinster, ordinarily sufficiently sapient, could not cope with the thought that if W. had his hand on the gun, the gun would blow up as its powder grains ennormalled, the

subsequent fragments ennormaling as the gun blew up, the Willain shredding as the fragments ennormalled with subsequent lack of space for W. to dodge in—where was I?

Oh, yes—wha happen to the expected small mountain of bloody shreds that would be W. after the gun's malfeasance?

It is too much to expect that the heat of the explosion ennormal W. or his separated fragments, yes?

Oh, well, skip it.

By the time you print this letter (we ignore the implausibility that it would fail to see the linotype) everyone will have forgotten what I complain of.

But rest assured, they will not have forgotten the OUTLANDER.

Comforting thought.

Think on this, lout—Alan Hershey, a member of the Outlanders, is (or was . . . moonfoam, thy name is fandom) Director of the LASFS, the MOST powerful, MOST biggest, MOST Null-A. fangroup in this or any other nationalistic division.

Six of the Eight are Laslos members, of the most influential; Ackerman was recently honored with the post of Official Honorary Member and allowed, after sufficient coin had flickered about, to write for the OUTLANDER #2.

Think, man, think!

The power of a group which deigns to deign Ackerman an Honorary Member, Mere, is not to be trifled with.

We accept your kind offer of apologies.

Lorgnette in hand the rest of the issue is given passing mention. AMPHISKIOS, LION OF COMARRE, the Bradbury story and all else up to snuff. The cover was sufficiently lurid so that eight people asked to borrow it at school, thinking it was a new arrival from Tijuana and contained feelthy comic strips.

Remember, I used to stick pins in my playmates to get control of their dolls.

Tempt not the wrath of the OUTLANDER!

And remember, SOUTH GATE IN '58!—10358 South Downey, Downey, California.

Okay, we'll skip the whole thing gladly. But tell us—what in Gehenna is an Honorary Member, Mere? Hereafter, to repair any past damage, we shall refer to your society as the Inlander Group—not quite so outlandish, n'est-ce pas?

## QUADRUPLY CURSED by Tom Pace

Dear Ed.: If some of my criticism seems to fall heavily in this letter, it might be because I'm currently suffering with four of Civilization's Curses—a summer cold, an aching tooth, a hangover and a slight touch of food poisoning—slight like Rocky Graziano's right hook. I can still read, though so why complain?

I liked "Fury From Lilliput," as I like any fresh and interesting treatment of a supposedly worn-out theme. And I've never run into the gimmick before. I haven't yet given up trying to visualize a line at right angles to the accepted three dimensions, so this should be right up my alley. At least I'm not following in the footsteps of Kelvin, who said he could understand nothing that he could not build a model of. What a dull character he must have been!

Is Murray Leinster a member of the Rocket Society, or of any other group with the same aims and goal? The way he is always dreaming up drives and fuels, he sounds like one. As a psychological detective I'm pretty poor, though.

While I'm talking about space flight and drives and fuels, let's go on to van Vogt's "Project Spaceship." The promise of spaceflight, not only in our time but possibly within this decade, seems to be inspiring the boys, for more and more this type of story is becoming even more of a favorite than before—or maybe they just want to get them done and sold before the actual first ship makes all "first" stories obsolete!

Too, the biggest element in most of the stories seems to be the struggle against bureaucracy and lack of interest. I think that reflects the nagging fear most of us feel who have dreamed about and talked about space flight for so long—that now that we are almost there, almost have it, someone or something will interfere.

A war, cold or hot—simple politics—or some other insane thing. Maybe a religious movement against it! Crazy things they sound like to stop—or delay—something like this, but don't bet that they won't. People, very literally, are the craziest monkeys.

All of which is not saying what I started out to say—that "Project Spaceship" is a very beautiful, simple and adult yarn, the like of which I'd admire to see again.

By the way, about a week ago a man who has been an engineer for some nineteen years, a man respected by every one of his associates as being, if not brilliant, the next level below brilliance, asked me how I expected a rocket to fly in space—where there's no air for it to push against.

Someday, I pray, those last nine words will be educated out of the human race.

After all, is Newton's Third Law that hard to understand? Clarke's "Lion of Comarre" had the beauty and strangeness that he always gets into his stories but was of course nowhere near "Against the Fall of Night" in that respect. It was good, though—that is to say, I liked it. I won't attempt to judge it for you other peasants.

I also liked MacDonald's "Amphiskios." The best bit in the story was the description of the landscape of Lassa. These other-world descriptions throw me.

And thus we arrive at Bradbury's "The Naming of Names." It has got past the point where one can refer casually to a Bradbury yarn as his "best," though "And the Moon Be Still as Bright" is it if there is a best. "The Naming of Names" will start me looking at the night skies for hours on end again—a habit which I am falling into more and more often these nights.

What forested or mountained planets, what strangely-colored prairies or purple skies, what different seas? What am I bid for the greatest dream of all . . . and the punch line is that it can come true!

I don't do a great deal of talking about it, seeming to have gotten past the stage where I feel it necessary to convince everyone I meet of spaceflight's inevitability. Perhaps this is because I do feel it inevitable—and I'm concentrating my energies on trying to get the sort of technical training that will enable me to take a hand in it.

Till then, just about all I can do is read Bradbury and his like and feel very gratefully that I have them to read.

And wait.

Glad to see Cleve Cartmill back, even though I've seen better by him. "Salvage" was head and shoulders above the average story of its type of a year or two ago, though—yeah, we're growing up. This story was darned believable.

These fans are characters, aren't they? Real gone—Or maybe not quite gone enough, in some cases. Mike Wigodsky is quite a cultured kid. Really grew up fast, didn't he?

Where'd the guys get all this vinegar this issue? Ward, Alton, Miss Mottley, Charmichael, Connor—politics? Left-wingers? What are they? Hmmm.

Speaking of Debussy, which I'm sure someone was—I was listening in at a jam-session-jazz concert the other evening when some character, obviously slumming, requested Clair de Lune. The guy in charge of things was Rollo Layland, a friend (I believe) of the late Bunny Berigan and a nice touch on drums.

One of Layland's obsessions is convincing people that jazz musicians like to play it sweet, too . . . they just like it to be clear and worth something. He was more or less miffed because the highbrowed and low mentalified heckler didn't believe the boys could play Clair de Lune—so they did just that.

Now, I know what you're thinking, and I would have been the first to regurgitate if they had hashed it, because that just isn't a number you jazz. They didn't try. No one in his right mind would compare a Dixie group's job on Clair de Lune with the kind of orchestration that it deserves, but these boys were all accomplished musicians (and not a beret in the bunch) with a feeling for something good—no matter where or when. They kept it true to line, and did an impressive job on it, considering.

Of course they got more applause when they took on "That's Aplenty," but then they were better equipped for that. They had Bud Satan (real name unknown to me) sitting in on piano and once on drums—ever heard of him?

All in all, it was a nice evening. You shoulda been there, Ed. Enough is enough. Is enough, Miss Stein would add. Is too much.—Brewster, Florida.

Okay, Tom, belated sympathies on your sour shape. That was quite a paean to something or other you came up with. Amphiskios the Beautiful perhaps? As for Bud Satan, he is just a name to us and Bunny, alas, just a memory—but what a memory. We used to hear him tee off in the Famous Door with a small combination—Joe Bushkin on piano and PeeWee Russell on clarinet—to say nothing of Eddie Condon on the pork chop and the late Dave Tuff on the drums. It was good listening, mighty good listening.

## OH-OH—WE WAS WRONG

by Perdita Lilly

Dear Ed: Thanks for publishing my letter in your August issue. First time it ever happened to me and I got a big kick out of it. First off, though, I gotta mention the fact

that you printed my address wrong, so if anybody wrote to me and didn't get an answer, that was probably the reason.

Pretty swell issue this month. Coupla stories were really good and none were too bad. I liked FURY FROM LILLIPUT pretty well and, by the way, what's the name of the artist who did the illustrations?

Although LION OF COMARRE started off well it ended up without much of a plot. Clarke seemed more interested in describing the wonders of Comarre. AMPHISKIOS had one of the most fascinating titles I have ever seen.

Next story that I really liked was DATE TO REMEMBER. For some reason it fascinated me although I guessed that Grahame was a Martian as soon as he started talking about it.

Well, I see you've got goold ole Oona and Jick back again (to be spoke in a sarcastic tone). What'd you have to waste Finlay on them for and, by the way, what ta heck happen to Virgie this month? Only one little illo.

You know, Bradbury's a good guy but he's in a rut—but def. His stories are usually good and always different but I'd like to see a change of subject occasionally. NAMING OF NAMES was a great story, though, the best in the ish. I like the psychological twist he puts in all his stories.

In conclusion—

Bergey covers  
Just the same  
Big strong man  
And sexy dame  
Color glaring  
Startling bright  
Fold the cover  
Outta sight.

—14169 Monte Vista, Detroit 4, Michigan.

We hope that address is on the proverbial beam, Perdita. As for the rest—

You're a scoffer  
What a shame  
Though we offer  
Mags aflame  
Most gals like  
Their men with muscle  
And the lads  
Decry the bustle.

So what is poor Bergey to do? Oh, no—not that!

## NEW LOOK? by Bill Searles

Dear Editor: What happened? You got the New Look finally or sumpin? The cover and style is different (no background), the print looks different, even you sound different. And stupider. Bob Rivenes said in his comment on "Hierophants"—"any relation to Ella?" and you said, "Who's Ella—Ella Fitzgerald, perhaps?" Most puns catch me cold, but even I got that one. That brilliant slip was the main reason I wrote. I just had to enlighten you.

But now that I'm here, I may as well comment on the Aug. ish. I liked the cover. The colors were beautifully used. "Fury from Lilliput" was an old idea, but it was exceptionally well handled. "Lion of Comarre" was up to the standard of "Against the Fall of Nite." It and "Amphiskios" (beautifully written) beat the novel. VV's story certainly did nothing to change my opinion of him. "The Naming of Names" was better than a lot of Bradbury we've had lately.

I wish those people who want to get rid of the Rittlerbushes would shut up. It's different from most S-F, but just because some people don't understand or like it, is no reason to eliminate it.

Now, here comes a rather original statement to make. I like Bergey. He has sort of a one-track mind as to subjects, but what he does do is good. Could it be possible that Bergey is sort of a collective pseudonym like Sterling? His style does change rather abruptly now and then.

Editor, why are you so secretive? It would be nice to know whom we're writing to. Gnaedinger and R.A.P. aren't anonymous. They're not as chummy, but they're not nameless either.

Oh, yes, I forgot to say "A Date to Remember" was a ditty. It must have taken some research.—827 Nathan Hale Road, West Palm Beach, Florida.

To you from Stupider—quite a lot of stuff to answer, Bill. The new look is accounted

for by a change in printers. We remain the same, as does Bergey. He has done all but one or two of our stf covers in the past five years. Last non-Bergey we can recall was for the issue that had Leinster's THE LAWS OF CHANCE—and that was SS. As for the Temple story research problem, about all it needed was a good almanac.

We remain more or less anonymous, but any of the fan groups should be able to enlighten you as to our identity.

## WHO'S A RADICAL? by George David Mills

Dear Editor:  
That radical changes in Thrilling appeared  
In the latest issue 'tis true  
In analysis after viewing all facts  
'Tis almost too good to be true.

Small type in letters, more to be found,  
Gems from De Pina and others on view  
'Tis to be hoped that the quality will stay at  
this rate  
But I fear that such issues will be too few.

Oh me and oh my and a lack 'o' day day  
Is it possible that this choice bit will see print  
But on view or no, this bit is found  
To the editor of Thrilling it will be sent.

Yours for better nonsense—Ridgway, Illinois.

Gad's truth in laudation sings George  
David Mills

Of changes in format and type  
To stories and letter and pictures he thrills  
So he writes us in metrical tripe.

But after he gives us a pat on the back  
So hard that his verse makes a dent  
He shovels up really implausible hack  
And seeks to make "print" rhyme with  
"sent."

It is we who now give vent to the lacka-  
day and long for a miseracordia with which  
to deliver an anapaestic coup de gras.

## CHAOS AND UNSANITY by Alfred Kobos

Dear Editor: I write this letter because I would like to find out something. I have been reading science fiction for several years, and have been impressed by the remarkable work the readers have done in forming clubs, publishing papers, having nation-wide meetings and so forth.

However, it seems to me that among all the readers there must be a few who are not content with only reading science fiction and ignoring the problems that it presents. Consider the civilization of the future usually depicted. Is the present state of the world any indication of a trend toward a saner life, a happier world? Are the basic problems of science and sociology today to be ignored and unanswered?

It is quite a cliché to say, "The time to build a tomorrow is today." Nevertheless it is quite true. But a few thousand people will not accomplish much—separately. I am convinced that among the people who are reading this letter there must be someone who is dissatisfied with the general chaos and unsanity of today and who could do something, but has despaired of ever doing anything constructive because of general apathy and inertia.

I think it was Oscar Wilde who said, "All of us are standing in the mud but some of us are looking to the stars." It is these few people whom I want to contact, particularly young people whose imaginations have not been stunned by a barrage of mass-production semantics.

I want ideas—original ideas from open minds—on any

subject, non-Aristotelianism, World Government, Existentialism, Relativity Literature, to prove that readers can think and can do something toward shaping a better future. I would also appreciate criticism, constructive or otherwise, as long as it is not dogmatic. With a small nucleus such as this I would like to find out whether the doom so often prophesied by the authors in s-f cannot be averted.

I have nothing to recommend myself, except that I am an idealist who is convinced this is not the best of all possible worlds and that things such as human nature can be changed for the better and that someone has to start somewhere, sometime.

If there already exists such a group, I would be very glad to hear any information about it. I decided to write to TWS principally because of the editorials, which seem to show a spirit that does not make this letter sound too ridiculous.—30 Sauquoit Street New York Mills, New York.

It is far from ridiculous, Alfred Kobos. We hope you make the contacts you want—some of them anyway—from the publication of this letter and that you will keep us in touch with whatever happens. Who on earth believes this to be the best of all possible worlds anyway? It's a pretty make-shift affair where man is concerned—and that is putting it mildly.

## SECOND GENERATION FAN by Mrs. C. J. Petersen

Dear Editor: Dad's science fiction mags have been devoured by me ever since I could read but never have I found time to write to editors. Now that I have a two-week-old son to take care of I finally have found time to say, "Thanks for a number of years of fine reading."

Of course, there have been quite a few stories I didn't care for but many more that I did. Your August issue was quite a novelty—in five out of eight stories the main characters were married—and in two women were by-passed completely. Nice for a change.

I shall not rate the stories as I realize that my opinion is only mine and the rest of your readers, mayhap, are interested in other types of stories. As for covers may I quote a doctor friend—"a woman is just a woman but a well-dressed woman can surely raise male temperatures." The cover women are anything but dressed as a rule—need I say more? (then too, tastes differ here).—317½ Wood Street, De Kalb, Illinois.

Thanks, Mrs. Petersen—and may your baby develop into a science fiction author or artist to the queen's taste. Write us again when you have a moment between bottles.

## FANOVA by William N. Austin

Dear Sir: My interest in fanciful fiction heightened to a point of actual enthusiasm only a few months ago, so it is not surprising that, despite all the enjoyment derived, I find myself constantly perplexed by petty incongruities and vague consternation.

For instance, was it your company that published the defunct STRANGE STORIES? I secured several issues recently, including the last issue (Feb., 1941), and was pleased with most of the stories included, authors Price, Colter, Derleth, Quinn, Burks, et al, usually affording pleasure to a marked degree. And "Will Garth"—a house pseudonym, perchance? "Hate's Handiwork" could easily be the work of Eli Colter, who had another story published in the same issue.

Seems a shame that a good magazine like STRANGE STORIES exists no longer, whereas several contemporary publications, reputedly devoted to the sundry manifestations of fantasy, continue to thrive despite consistently inferior yarns.

Howbeit, your two contributions to fantastic realms, TWS and SS, continue to improve with each issue, especially during the past two years, leaving little room for criticism of individual efforts and practically none in policy. We get quality and quantity—illustrations, adequate to excellent—interesting letter columns—revivals in SS. No complaints from this quarter, except.

Well, why not a revival of STRANGE STORIES? There are a number of writers turning out fair science-fiction who excel in fantasy, straight, humorous or supernatural. There



existed a magazine a few years ago, now unknown, devoted to high quality fantasy, including full-length novels. If the laws of supply and demand exemplify anything, the dollar-to-three dollars requested for copies six to ten years old ought to offer a solid enough cue for some hard-headed financier—that a tangible profit is to be derived, thereby enabling future Merritts, Klines, Burroughs, etc., to pay for their groceries too.

I am interested in forming a fantasy fan club for Washington State fans and will be pleased to hear from fellow-enthusiasts in the Evergreen state.—3317 West 67th Street, Seattle 7, Washington.

You'll be hearing—plenty. Especially since Seattle is a fan hotbed at present, as is the entire Northwest. Are you there, Don Day?

As for STRANGE STORIES, which came and went several years ago, we appreciate your kind comments—but no revival is currently planned.

Will Garth was and is still occasionally a house name. In this case some of the stories were written by Henry Kuttner, some by Charles S. Strong, some by others. The Eli Coulter thing doubtful. Luck with your fan-association.

## THAT NEW LOOK AGAIN

by Ed Cox

Dear Sam: Well, I see we have a new look around here (there being the August TWS). Looks a bit pulpier, print overinked in places (but easy on the eyes when just right) and a drastically ensmallled (hmm, where'd that word come from?) TRS print case.

But the most important thing in the mag is unchanged, the story quality. Let's fear into 'em!

FURY FROM LILLIPUT. A problem is set up and solved. That is the basic requirement of any Leinster yarn and was worked out to the fullest in this story—not very entertainingly either. I won't say that the story wasn't worth reading, but I wish Will would liven up his stories. Inject some of the life that a certain Leigh Brackett is so adept at getting into her stories.

THE LION OF COMARRE. This story shows full well what a great contemporary Clarke is becoming. His star is rapidly rising high in the firmament of sfantasy authors. This didn't quite catch the nostalgia of some of his shorter work nor the wistful far-future atmosphere of AGAINST THE FALL OF NIGHT but still was very good. It calls for a sequel doesn't it? The transition should be very good story material.

AMPHISKIOS. John D. MacDonald isn't bad at super-science in his own particular way and this is a good example of him at his best.

PROJECT SPACESHIP. This is second-rate van Vogt. Seems that an atmosphere of "let-downness" pervades this story. How about getting the real van Vogt science fiction, more like his WEAPON SHOPS OF ISHER work? How about it?

FREE LAND. This inspires no comment.

SALVAGE. Enjoyable but not memorable. Most significant is the fact that you have Cartmill. Now make him produce!

A DATE TO REMEMBER. This is anthology material! I suspected the outcome to a certain degree but not enough to "spoil" the story. Truly a unique idea (to my knowledge) and well presented. Temple is stepping right along. Inspires me to want to read more by him.

THE NEO-GEODUCK. Hasn't she forgotten this series yet? After her well-done THE SACRED MARTIAN PIG, this is a disappointment. But it sells and that's what she's after.

THE NAMING OF NAMES. At last! Another good Bradbury Mars-yarn. Still not up to the high level of his first stories on this theme but an improvement over those slump-stories. Where's that novel?

Astarita has the consistently best work in this issue. Finlay average and Stevens fair. Seems as if the art needs a shot in the arm if you ask me (yah, I know you weren't).

Next issue certainly is mouth-watering (in a literary way). West is back huh? Hope he can adjust as well as Burks and some of the others. Brackett! Thank you, my friend, thank-youthankyouthankyou! And de Camp! Hope he stretched out and really got to work in this enlarged TWS.

What's going on in the "back room" butt session this time? I'm glad to know de Pina is going to write again. Latch onto him! Rex Ward back too! You're wrong about Benj. Miller being Kuttner pal. And what's wrong with Fred Brown? Won't start feeding with anybody. Not even Collie Clements. And, gad (aw) Milty Rothman feeling

off at the scienti-squib! But still nothing to bare fangs over.

Do I detect an overtone of hysteria in ye Editor's reply to Max Alton's letter? See how considerate I am? I never even mentioned the cover (until now 'course) to save your fingernails wear and tear. And see here, Frying Panner, the OUTLANDER is the biggest humorzine to hit your mailbox in ages. Don't be so green-eyed about it!—4 Spring Street, Lubec, Maine.

You'll find van Vogt, done to the favor and flavor of an stf Escoffier, in the lead spot of the January SS—THE SHADOW MEN is, to our way of thinking, one of his finest novels to date. As for the hysteria—you're so right. Blame us?

Incidentally, anent a number of comments that have come in regarding the changed appearance of TWS—nobody has seemed to notice that our pages have been enlarged a half-inch in length, so that now we can print more material per issue than before. A half-inch of extra type per column mounts up to quite a sizable increase in reading matter. This ought to please you!

## NAVY MED

by H. S. Weatherby, HMI

Dear Editor: May I write to THRILLING WONDER STORIES, voicing my humble opinions—telling of some fanzines, so far ignored?

Although I'm somewhat advanced in the years and the Navy, science-fiction is new for this sailor, howsoever medically educated. Yet I thought John D. MacDonald's AMPHISKIOS was tops for characterization and driving interest. His atmosphere, backgrounds and italicized suspense-portions were excellently conceived. I have read Mr. MacDonald in STARTLING STORIES and would enjoy more stories by this top-ranking author.

Murray Leinster's FURY FROM LILLIPUT took second place but that's no dishonor in such top-drawer copy. I hope that Leinster, an artist of fantasy, will continue to scribe interesting novels.

Why should Ray Bradbury be placed at the back of the magazine? I think he is tops. The NAMING OF NAMES certainly had authentic atmosphere, clear-cut style and an all-important theme. Give the Bradbury a chance, will you?

William F. Temple knows his psychiatry in A DATE TO REMEMBER. Congratulations, Temple, it's a well-done short.

FREE LAND and SALVAGE run hand-in-hand, both of them being quite good. I place St. Clair's NEO-GEODUCK at the bottom, where the darned thing belongs.—District Medical Office, Great Lakes, Ill.

Bradbury's landing in the back of the mag is a matter of make-up luck, not intent to put him at the rear of any credit parade. Outside of lead novelets and novels all stories are put where their layouts and page lengths will fit—merit has nothing whatever to do with it. That settled, thanks for writing us and please do so again soon.

## WHAT'S WITH LIDDLE CHUM?

by Lin Carter

Mine liddle chum: Well now, it's been quite awhile since last I laid forefinger to typer key and sent another witty epistle on its destined way to the hallowed precincts of 10 E. 40th St. and th' ole urge has hit me again. Rather nice cover this time, in a little different style at least. Didn't care for the color scheme though, but I suppose it's here to stay.

I shall refrain from making any comments on Leinster's novel, except to say that the same weary ole plot has been beaten into the ground, year after year, by Cummings and other hacks. Stevens' illustrations brightened up the thing, though.

I went into "The Lion of Comarre," bright-eyed and fresh, hoping to find a yarn built around some mythologi-

cal or historical character like Richard Plantaganet, the Lion of England. And what do I find, but that the dopey thing was actually about a lion. Sir Editor, you are breaking my illusions. Fine, poetic title; I'm sorry the story didn't live up to it.

As for "Project Spaceship," it's been my opinion for years that van Vogt couldn't write a poor story even if he tried. "The Naming of Names" was a little better than Bradbury's recent stuff. I wish he would write about some other planet. Mars. Mars. Mars. Marsmars marsmars gahhhhhhhhh! What's wrong with Venus?

Ole Tey seemed rather short this time, or was it the new type? Mike Wigodsky, Rex Ward, Wilkie Connor and Bullock had some nice stuff. Ward brought up a point that has been one of my favorite arguments. Namely, that the opposite sex is not fundamentally creative—in an artistic sense that is, not biological. Look at the field of painting. Who do you think of offhand? Raphael, Da Vinci, Holbein, Corot, Matisse, Picasso, Dali, and so forth. No women. Poetry? Chaucer, Shakespeare, Milton, Byron, Shelley, Keats, Coleridge, Poe, Benet, Eliot. Again, no women. And it's about the same way with prose, sculpture and the minor arts. And yet the Common Man looks down on poetry and art as being effeminate and on the poet and artist as perhaps a little queer. Funny, isn't it?—1734 Newark St., So., St. Petersburg, Fla.

You're asking for it, bub, when you deny women a place in the so-called creative arts. According to many theorists the only reason we have had so comparatively few women in painting, sculpture, music, literature and poetry is because, until freed from housework and childrearing drudgery by dishwashers, vacuum cleaners, laundromats, diaper services, frozen foods and the like, women simply had no time to master them.

Yet you are wrong to count the girls out. Whenever they have had opportunity to express themselves, they have stepped right up and done so, from the poems of Sappho and the skilled creators of the Bayeux tapestries—through Elizabeth Barrett Browning, the Brontes, George Eliot, Mesdames leBrun, Greuze and Bonheur, not to mention Chaminade—to Georgia O'Keeffe, Malvina Hoffman, Edna St. Vincent Millay, Virginia Wolfe, Edith Wharton, Lillian Helman, Willa Cather, Isaac Dinesen, Kay Swift. And that is just a few. Save in serious musical composition the girls are in there—and very few men have been truly great composers.

As for the views of the so-called Common Man (whatever that is) Philip Wylie pinned him to card neatly when, in *Generation of Vipers*, he subheaded his chapter on same "The Backside of Humanity."

## BETTER LATE THAN EVER

by Roberta Hesse

Dear Sir: This is a rather late missive, I know, but upon a belated perusal of the readers section of TWS I ran upon a letter by one "Clements" (distinguished from Jack Clements by caps. It seems that F. Clements, while attempting to bite off the head of a fellow fan, missed and gnashed both shift keys off the typewriter).

Well, Mr. Clements wants to know what fem fannes are escaping from. Maybe my own experiences will help Mr. Clements understand. On one side of our home is a family of Communists. To escape from the endless clash of hammers and sickles I turn to TWS, only to find it in the throes of a Communistic battle in which everyone seems to be on the same side. Why the fight?

On the other side is a neighbor who practices body building and likes loud march music. Trying to shut the blaring strains of "The Storm King" from my ears and dodging

stray bar bells I pick up TWS. One glance at the cover and VOOM! we're back to loudness again. Also, despite the fact that I am two years her senior, I cannot seem to paint any better than Grandma Moses. So you see, Mr. Clements, we femmes are merely trying to escape from the everyday down-to-earth problems of life, the same as every male reader.

I would consider A DATE TO REMEMBER the best story this issue. Quite thought-provoking.

Next was THE NAMING OF NAMES. Really a beautiful thought when you get right down to it. After the second reading the chill sort of wears off.

I'm sorry I couldn't like FURY FROM LILLIPUT. But I will not pan it. I cannot pan anything unless I can do better. I imagine Leinster's novelet was quite all right for those readers who like that type of reading.

PROJECT SPACESHIP can only be enjoyed to its fullest if you first read that current fantasy novel ZOTZI Lovable red tape.

And now comes a confession. I was one of those who wailed for Finlay in TWS and SS. Now he is here and, frankly, I am rather disappointed. Stripped of his fantasy material, Finlay loses some of his style. His perspective, drawing and composition are still wonderful but there is something of the old Finlay lacking. It is enough to make a Finlay fan weep great big tears. You just can't please us, can you? Looking forward to your next issue of TWS.—3208 25th Street S.E., Canton, Ohio.

No, but we're still in there trying, Roberta. Sorry about that Commie business—we won't let it happen again, we hope. Those so-and-sos do keep coming out of the woodwork, however. Happy bar bells.

## EVERYTHING'S JAKES

by John W. Jakes

Dear Editor: Just finished the August ish. New printing, no? Not bad. But let's have done with nauseating light conversation. Here are the stories the way I liked them.

1. THE NAMING OF NAMES by RB. Magnificent! There is nothing that can be criticized. The writing was superb. Ray's word-pictures were the best he has ever done, and all the way through this story I had a feeling that only strikes me once in a while, reading stf—This is not far-fetched imagination. This really could happen! I know that Groff Conklin in his Best of Stf says science-fiction, differentiated from fantasy, is supposed to be able to happen, but most stf stories don't give me that feeling. This one did. Bravo!

2. THE LION OF COMARRE. Not as good as "Against The Fall of Night," perhaps because former was book-length, this still rates very high. Clarke's world of tomorrow, where science is scorned, is an original twist and his use of it makes for interesting reading. Besides that I especially enjoyed the characterization of Leo the Lion. Dunno why. Maybe I'm on my way to second childhood.

3. THE NEO-GEODUCK. This comes third because I enjoyed St. Clair's little devices, styles and habits of the future. The story was routine but the descriptions of the characteristics of tomorrow make it delightful reading. As a Sunday supplement book reviewer might say, "Good summer hammock reading."

4. A DATE TO REMEMBER. Fourth because Mr. Temple had the ingenuity to take an old saw such as this series of dates and make it into a plausible and highly readable story.

5. AHPISKIOS. John D. MacDonald is coming up in the stf world. First read him in detective pulps but now he has moved over to become a competent writer of our beloved science-fiction. Note I say competent—not great or any such other superlative. MacDonald's stories are always interesting and fresh in idea but they lack the creative imagination of Kuttner or Brackett or Heinlein or Bradbury. MacDonald is a good technician, also a fairly good writer. Technical writing alone is pretty bad but with a little ability a writer knowing the mechanical construction of a story can do OK. The story was rather interesting. I liked it and I hope John D. MacDonald will someday soon become a stf great. I think he's got it in him.

6. SALVAGE. Cleve Cartmill's little number was an entertaining and pleasant bit of easily forgettable space opera. Not particularly brilliant it held the attention fairly well. Good filler.

7. FREE LAND Not bad, but falls pretty low on the list. The idea was rather interesting but was spoiled by unimaginative and colorless writing.

8. PROJECT SPACESHIP. Oh-oh. Get set for a shock. I expect rocks, bombs and other assorted mayhem to smother me but I must make this statement: I have never particularly liked A. E. van Vogt and I still don't. Critics say he's the greatest author of stf but I don't think so. This story was too short, as all his latest efforts but WEAPON SHOPS OF ISHER have been. He is better, I must admit, at long stories. But these little "quickies" don't even grasp a bit of the color that made World of Null-A and The Weapon Shops interesting. He seems to be doing these shorties to make a

9. Here comes another blast. I didn't like FURY FROM LILLIPUT. And I don't like Leinster either, although he's another one of the greats. The story idea was old but well handled. It is the characterization! Why, ed, oh why, must the hero always meet, just by chance, the one girl for him in the particular story we happen to be reading. Each Leinster story seems to be a pairing off of a male and a female whose little number tags or whatever match, so that they are meant for each other. The hero always burns with rage when someone hurts his girl-friend. He sobs and moans and worries in a false fashion. Conflict is the essence of a good story, and just because love is secondary does not mean it has to be idyllically handled. For heaven's sake let's not have any more sweet virtuous things meeting handsome youths and immediately falling in love. It gets awfully tiresome.

Now with these foul epithets off my chest, here's a run-down of the pics.

FURY FROM LILLIPUT. Good. Especially p. 15.

THE LION OF COMARRE. Marvelous! This Astarita (I see he's signing his name now) is really good. Let's have more.

AMPHISKIOS. Another Astarita. Same comment as above. MORE!

FREE LAND. This looks like Astarita once more? Is it? Anyway, pretty good

PROJECT SPACESHIP. Excellent.

SALVAGE. Not too good.

A DATE TO REMEMBER. Noo . . . I hate Napoli. Dunno why. Ah well . . .

THE NEO-GEODUCK. Good-uck. Good ol' Virgil.

NAMING OF NAMES. Hooray once more for our boy A.

Well now that I'm through tearing you apart, let me assure you that I will continue reading TWS despite the stinging comments I make. Looking forward to the next ish with Kuttner and Brackett back. Also de Camp. Good for Sprague. He's one of my favorites. See you when The Hibited Man follows The Lure of Polaris to The Lake of The Gone Forever to engage in a Cold War about a dispute over High Jack and Dame. Farewell!—5300 Glenwood Avenue, Chicago 40, Illinois.

MacDonald has already arrived—editorially at any rate. And when you read his magnificent novelet JOURNEY FOR SEVEN, currently scheduled for the April, 1950, issue of TWS, you'll agree. He is also at work on a novel for SS which may appear even sooner—and which should serve to establish him. That lad can write!

As for van Vogt, see the January SS as already mentioned. His novel there will be fine. As for your stinging comments, brother Jakes—or is it Jukes?—they sting all right and in spades. Seriously, keep the letters coming.

## FLORA

by Bob Farnham

Dear Ed: I have just finished reading the August THRILLING WONDER STORIES and have to thank you once again for a perfect issue . . . even the cover pic was OK, but just out of curiosity, is that a bath towel he is wearing?

FURY FROM LILLIPUT—Kuttner was about the best I've seen in some time, but can you call it strictly STF?

SALVAGE—Cleve Cartmill is the first bit of real humor that has come to the pages of either TWS or STARTLING STORIES in a too-long time. I got a real belly-laugh out of that last line!

The July STARTLING STORIES carried a letter (I missed that ish) written by me, as I am told, as Sec.-Treasurer of Science Fiction-International. I have not been connected with that or any other fan club for over a year.

If anyone has a spare copy of July STARTLING, I'd like to make a trade with them.

THE READER SPEAKS was jammed with many thought-provoking letters and while I agreed with many there were one or two that made me see red, so I'll play safe and make no comment other than to say I enjoyed reading it.

All in all, a splendid issue and my sincere thanks for same. For a few days I'll live at the present address in JAWJAW. —432 South Spencer St., Dalton, Ga. c/o Kitty-Dell Florists.

Tsk, tsk—Kuttner didn't write FURY FROM LILLIPUT, Bob, it was Murray Leinster, in this case synonymous with Will

F. Jenkins. As for the mixup in July, your name was run as acting secretary of Science Fiction International in the stfan club listings. That's the way it was sent to us. Hope you enjoyed summering in the florist's shop.

## HURT BUT NOT QUICK

by Robert A. Rivenes

Dear Editor: You hurt me to the quick. I know what ultimate means but what I didn't know was how it applied to the story, which I have now forgotten. And I'll have you know that I use a dictionary very frequently in the process of solving two or three crossword puzzles a day. This will stop, however, when I return to school for the summer. I'm now on the working part of the N.T.I. coop plan.

And that brings up another point. As far as I can see sfiction is the only place where crossword puzzle words wouldn't be out of place. Some of the world's real words are as odd as those that St. Clair employs.

I'd like to say a little more about humor in sf. According to my way of thinking, however primitive, a greater share of the humorous sfiction is nothing (I could stop here) more than a light story treatment with no serious attempt at humor. After all, except for the hacks, writers in this field are primarily concerned with science and its effects on humanity. A humorous effort by sf author is considered as merely a breather and if properly done will see print because of the extreme fatality of that type of story in the hands of the readers.

"Siehst du" Metchette, who mentioned a number of supposedly funny sf stories, didn't mention the funniest (not just humorous but yakkingly funny) of recent sf tales, "Venus of the Seven Sexes" by Sturgeon. I know. That's just a pen name for George Blubitz.

FURY FROM LILLIPUT—To the best of my meager knowledge this is the first time anyone investigated the physical effects of size reduction. Leinster did an extremely fine job except (here it comes) for the impossible way he had the hero handily navigating about on the water. And the fourth paragraph was really a surprise. Who could imagine that the cruiser Bazooka III would be an ordinary seagoing vessel?

THE LION OF COMARRE—At first it seemed that someone had finally written a story in which new inventions were impossible but no, Clarke did sneak out of it.

AMPHISKIOS—MacDonald has finally blossomed out as a sf writer. I hope his sf hack is gone forever. Now what I'd like him to do is combine one of his fine 'tec plots with sf. I'll duck now.

THE NEO-GEODUCK—'Mid thunderous ovation from the multitudes. Oona and Jick return for a bow. Have you noticed how similar are this series and all of Bradbury's stories. The future and its effect on unsupermannish characters are the basis for both. I wonder who does the better job?

THE NAMING OF NAMES—Utter perfection. Notice the title. A mere mention of it years from now will be all that's necessary to recall to mind the entire story. And that's as it should be. Every paragraph breeds terror, which is odd but still good considering the vehicle it appears in.

I hope Ray hasn't given up his Earth-bound fantasy. The other planets may be all right but, after all, Earth is closer to home. Mmmmyess, I guess that's true. What is surprising about Ray's stuff, is that you can concentrate on it no matter where you are. I'm not fooling when I say that I read the above story at a session of the midget auto races. I'm pressed for time.

I'm surprised at you, a master of puns, not getting my poor attempt but you must be pressed for time, too. Hierophants? . . . Ellaphants? It probably would be better if I explained this month's pun ahead of time. Siehst du? . . . C. Stew? Ohhh! . . . Now I get it . . . Clever—Oak Park, Illinois.

Ella-phants—ye Gods and little pisces! Now, we suppose, you'll be considering your prickly epistles as representing the national flower of Scotland. Don't worry about RB—he has some very surprising new stuff due to appear shortly in these pages and those of SS. We're going crazy trying to work Ella Raines into that pun of yours. Hiero—Raines, perhaps—but no, that will never do.

## LET'S DO IT ALL OVER AGAIN

by Elizabeth M. Curtis

Dear Editor: Dirk Schaeffer's letter in the August issue of TWS brings up a point which I have long been considering, namely the reworking with variations of well-known themes



and plots. Perhaps the ratio of people scandalized by swinging the classics to hep-cats who get a kick out of it is greater than was the ratio of people shocked by Shakespeare's version of the Hamlet story to those who thought he did a good job with it. Perhaps our attitude these days is "novelty or nothing." I hope not.

I think it is devoutly to be wished that every good plot or problem or intriguing situation may prove some stimulus to every creative mind that comes in contact with it. Sophocles' audiences are reputed to have waited breathlessly for the new dialogue of what was to them an old tale. Children, those severest of critics, seem to have an appetite for each of the scores of variations on the Cinderella story. And one solution of a problem is so seldom the whole situation for everybody.

As a case in point, *THE LION OF COMARRE* by Clarke in the August issue is another working of the theme of friction in the relations between men and machines. Clarke settles, I think, for complete membership in society for the machines. His solution is, for me, much more valid than that given in a recent novel by Jack Williamson in which machines find it necessary to dominate man "for his own good." The values of machines are not the values of men. Clarke suggests that they can live in mutual respect. This idea seems both desirable and acceptable to me and I'm glad Clarke was willing to deal with an "old theme."

The theme of *PROJECT SPACESHIP* by van Vogt will take plenty more versions. Selling the country on any non-military research project is a problem of such dimensions that we can use all the solutions creative minds can work out. The validity of these solutions is also tested in fiction, as the reader realizes that the courses of action offered are or are not reasonable and psychologically workable.

As our scales of values are enlarged and enriched by the creation of fiction heroes, so these values are fixed in our ideas by the repetition of heroic virtues in story after story. The idea of an adaptation to an alien frame of reference, as in Bradbury's *THE NAMING OF NAMES*, is one which will, I hope, give rise to more stories which will help to cultivate in the reader a desire to possess the ability to make certain adaptations, such as that from a conflict-based civilization to a cooperation-based one.

Margaret St. Clair's *NEO-GEODUCK* is one of those rare pieces which make me get a kick out of what I have and what I'm doing. Her future-gadget-slang remains with me to make me smile when I whip up a cake with Fluffo, later to wrap it in Pliofilm and deterge the pan with Squeek. Bless the gal. And if the readers are not keen about a thousand more years of flower shows and bridge parties and vacation trips, let them take progress into their own hands.—Canton, New York.

Dear heaven, Elizabeth, there are no new stories as such. So worry not on the subject of novelty in fiction. It is, as it has always been, a matter of the depth, talent and above all, the viewpoint and philosophy of the author—plus the characters and situations resulting from character temperament which the author employs to portray his story. We have long maintained, both as editor and author, that the same story idea, given to fourteen different authors simultaneously, would result in fourteen different stories. In fact, it always has.

You are correct about fiction being the best medium for conveyance of ideas. One  
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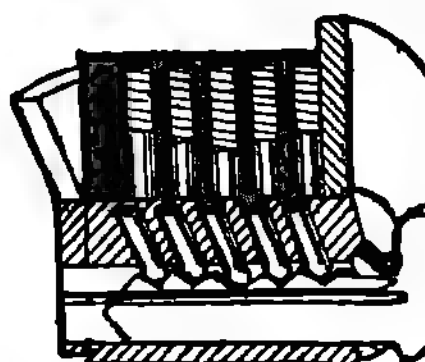
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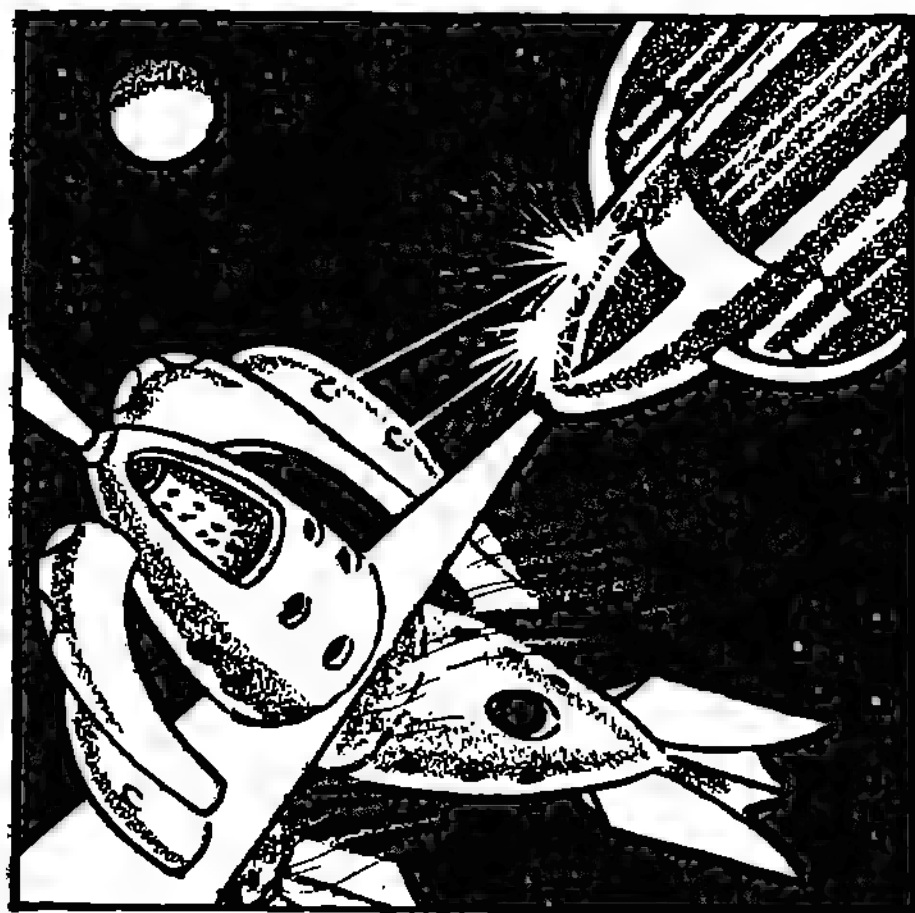
quick look at the furore aroused by the singularly impartial Uncle Tom's Cabin just about tells the story. History is full of examples in which an author's make-believe has contributed to the thought of whole peoples—which is why dictatorships are invariably hard on honest writing folk. Voltaire, Rousseau, Zola, Henri Barbusse and scores, perhaps hundreds of other novelists have played, through their creations in the world of ideas, vital roles in human history.

A nice letter, by the way, Elizabeth. Encore.

## WANTED—ANECDOTES by Sam Sackett

Dear Editor: I am contemplating a scholarly critical study of these six science fiction writers—Ray Bradbury, Robert A. Heinlein, Henry Kuttner, Clark Ashton Smith, Theodore Sturgeon and A. E. van Vogt.

Perhaps some of your readers have knowledge of some biographical details or anecdotes concerning these men; or perhaps they have letters from them offering some clue as



COMING IN THE NEXT ISSUE

# DEAD RUN

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to why they write what they write. If so, I should greatly appreciate hearing from them—and if my study eventuates in a book they may be sure that I shall properly credit my sources.—Route 2, Box 24, Redlands, California.

We suggest you get in touch with Donald B. Day, 3425 N. E. 38th Avenue, Portland 13, Oregon, publisher of the FANSCIENT for the Oregon Science Fantasy Society. He has been running extremely complete profiles on science fiction authors of note, one to each issue of his excellent quarterly. Bradbury, Leinster, Bloch and others have already appeared, with complete stf biographies of each, and we suspect he will have most of the men you want on tap or will know of source locations.

Of course, we hope any readers who have such material will get in touch with you. Good luck and please let us see the outcome. It should be rewarding.

Well, that seems to be that—all in all an interesting department to write and compile. We hope it comes out as well in the reading. We'll be looking for you in the January STARTLING STORIES and, back in this corner, in February. Hasta la vista.

—THE EDITOR

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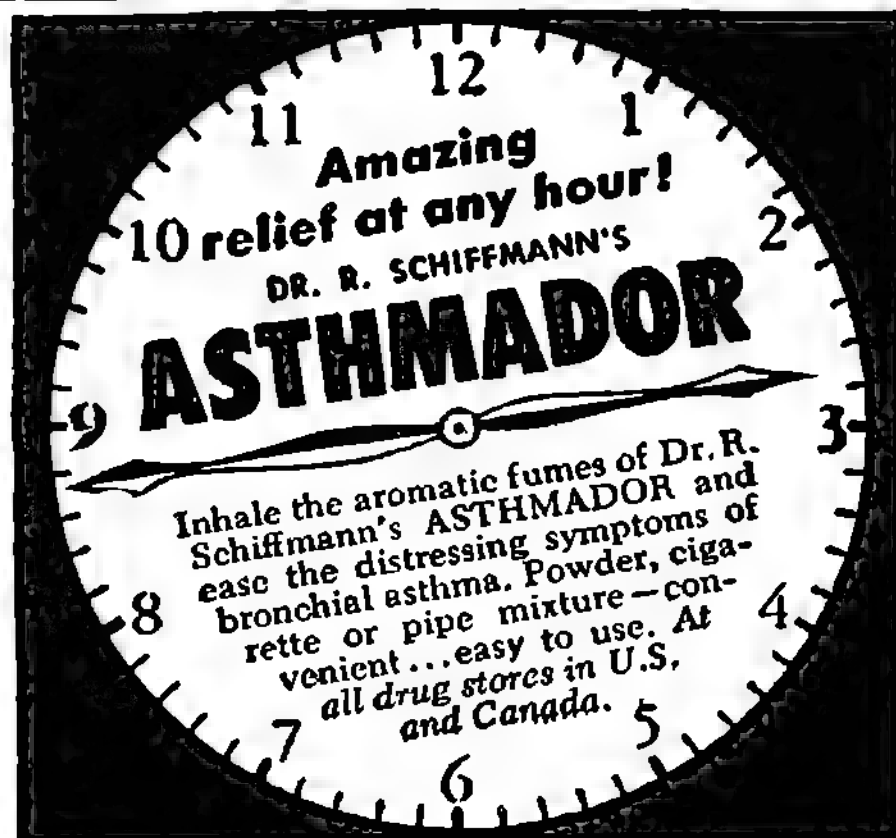
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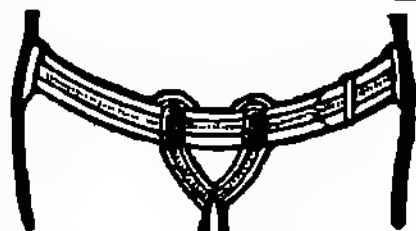
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## The FRYING PAN



## A REVIEW OF FANZINES

SINCE the recent level of fanzines received here has been remarkably high both technically and in content, we have been hard put to it to find sufficient choice bits with which to fill this, our frying pan. In fact, until just before deadline we were considering filling space with a few choice excerpts from Eric, or Little by Little—or, perhaps, a few quotations from Helen's Babies.

But Allah, or rather "Y'r new Navy Editor, H. S. Weatherby, HM1, has been merciful. In the nick of time arrived a large something entitled THE BLACK SKULL MAGAZINE. Although TBSM proclaims itself on the cover as "Our First Issue" and is listed inside as Vol. 1, No. 1, its editor's opening statement begins as follows—

You lovers of the strange and supernatural, we're here again . . .

Again? How come? But this is a mere bagatelle compared with wonders yet to come. Editor Weatherby, HM1, goes on to say—

We present "THE ABOMINABLE" . . .

—and sure enough, he does, in the presence of a lead story by Herman King and Harry S. Weatherby (that name is growing increasingly familiar). The introduction begins thusly—

Have you some acid handy? Before you



retire, look in the trees and the bushes or, perhaps, beneath your bed. A Thing, my friends, is loose upon the earth, a Thing unminifol of Life. Do you detect a horrible odor...?

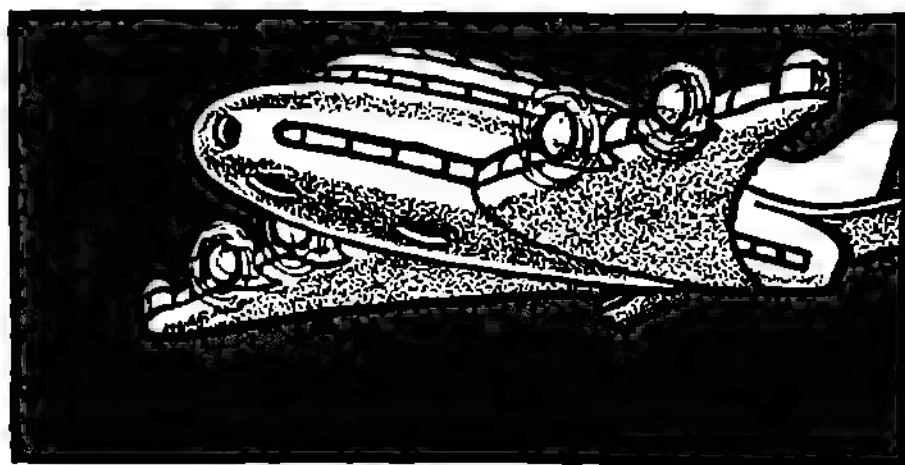
Well, yes! *Rather!* And another of the feature stories in this Frying Pan bonanza bears the remarkable title **GUEST UNDER THE HOUSE**. Also included is something called **BLACK HORROR FROM THE VOID**. The whole thing is wrapped up in a statement claiming for **THE BLACK SKULL MAGAZINE** a purport to "combine the talents, and literary works, from the editors and authors of the United States Navy, and the United States Army, as well."

The U.S. Marine Corps is invited to join in the fun but has thus far managed to stay aloof. As of right now we're for calling a halt to this particular armed services unification program. Brrrrhhh!

### Shades of Sneary!

And now, after hovering vulture-like over the fanzine field, we swoop down on **SPATIUM**, "official organ of the Central New York Science Fantasy Society," co-edited by Harold W. Cheney and Ronald Stone, of Little Falls and Clinton, respectively. In their June-July issue they have included a something by  
[Turn page]

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## THIS GREATER CONFLICT

A Novelet of the  
Peace Engineers

By **RAYMOND F. JONES**

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fan Jim Goldfrank, entitled **THE TIME MACHINE THAT WOULDN'T STOP.**

We have no intention of discussing the merits of this story as such—we fear the task would be well beyond our feeble critical faculties—but the spelling is our dish. Misspelling, rather. Shades of Rick Sneary! We never noticed Mr. Goldfrank's etymological tendencies in the several letters he has written for our reader's column. Perhaps he has just blossomed suddenly, like a crocus in early spring. At any rate—in the slightly over a page taken up by the tale we found some beauts, to wit—

*Par. 2*—"expermenting" and "... Bertha, an ally cat he had made intelligent by a few inoculations." Not only are *expermenting*, *ally* and *innoculations* flagrant misspellings but inoculation, according to our Webster, means, 1.) Act, process or art of inoculating. 2.) The introduction of minute organisms or of serum or the like into living tissues, milk, culture media, soil, etc.; in medicine, such communication of a disease virus to a healthy individual in order to induce a mild form of the disease and produce immunity. In other words, the alley cat was protected against intelligence if inoculations were used.

*Par. 5*—"Underneath the pot was a bunson burner . . ." *Bunson* burner—ouch!

*Par. 8*—"I was just thinking how oncongruous it was . . ." No comment.

*Par. 16*—"... yelled Bill, thunderstricken." *Donnerwetter!*

*Par. 18*—"... spoke the apperation." Let us tell you about *our* apperation.

*Par. 24*—"... neccessary." Are you sure, Brother Goldfrank?

*Par. 33*—"Interresting." Oh, very! .....

*Par. 34*—"... emmitting . . ." Nifty.

*Par. 38*—"... appeared a teening metropolis." Just out of its infancy, what?

## The Fantopologist

And, in closing, one brief swiipe at the second issue of **THE FANTOPO-**

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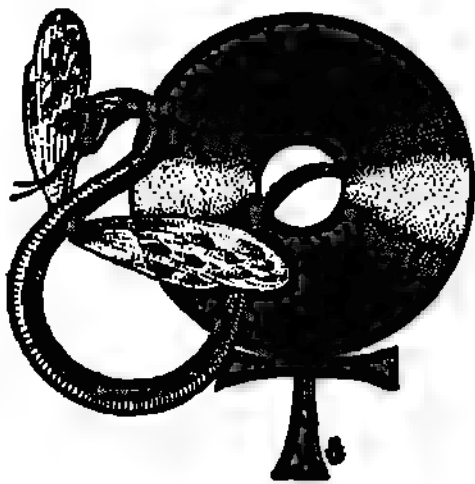
LOGIST, whose editor and chief contributor, H. T. McAdams of Bethalto, Illinois, can apologize for a horror in the very first paragraph of his opening editorial, which reads—

The response to the first issue of *The Fantopologist* was gratifying, to say the least. To paraphrase a story-title by Stephen Vincent Binet "Everybody was very nice."

Anyway, Mac, you couldn't have meant his brother, William Rose Binet. And we always thought the Binet test was an I.Q. thing for toddlers! Actually, the surname of the gifted brothers remains Benêt!

—THE EDITOR.

When Nancy Holt suddenly vanishes in quicksilver, Dick Blair storms the gate of a strange universe in—



THE OTHER WORLD

By

MURRAY LEINSTER

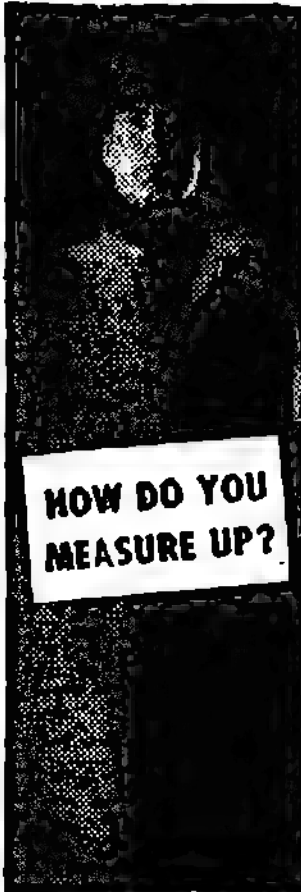
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## SCIENCE FICTION BOOK REVIEW

**SEVEN OUT OF TIME** by Arthur Leo Zagat, Fantasy Press, Reading, Pennsylvania (\$3.00).

It seems a pity that Arthur Leo Zagat did not live to see this, his best and best-known science fiction story, appear in book form. But at the same time the rest of us can be grateful—for outside of a somewhat needlessly juvenile hero, this is a grand story, with all the mystery, sweep, suspense,



drama and cosmic ingenuity which every stf tale should have and so few do.

It tells of a young attorney named John Marsh, who is assigned to locate Evelyn Rand, an heiress who has vanished, apparently without trace, from a sidewalk on New York's Upper East Side, in a whirling eddy of dust.

It seems as if no clues exist from which she can be traced or trailed.

But Marsh, steeping himself in the girl's background, discovers the bizarre little snake-amulet in her bureau. He learns of the eddy of dust which appeared earlier, outside her country cottage, and left her alone and bitterly disappointed. He visits an art show to see her portrait and there he meets the odd little man who calls him-

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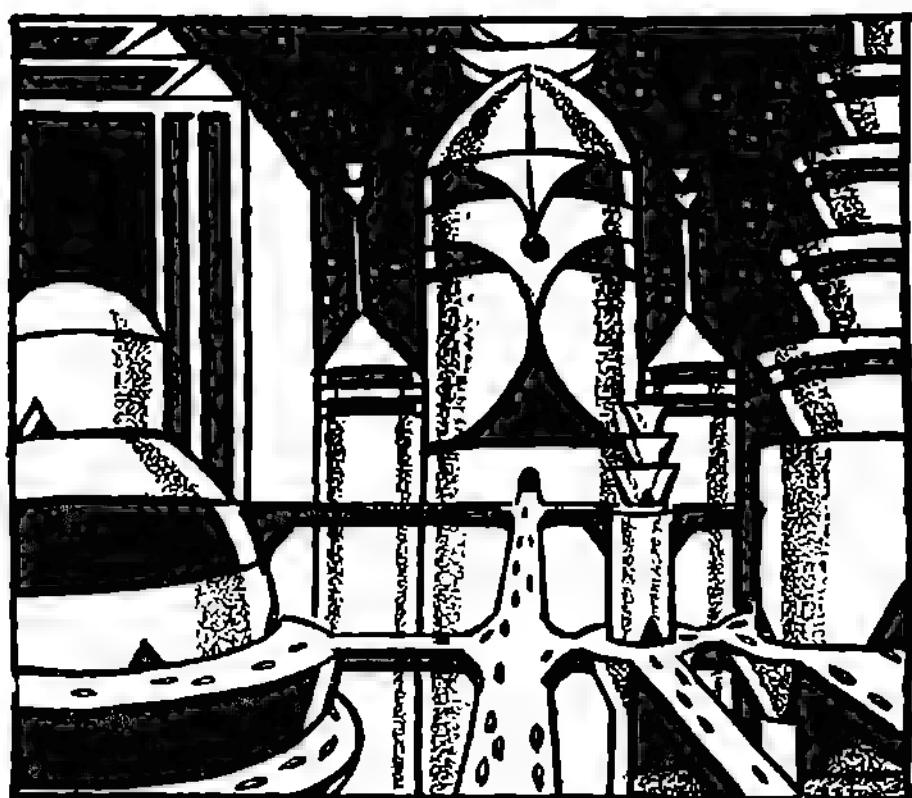
self Achronos Astaris and gives him a card. He has trouble finding the Brooklyn address Astaris had given him but find it he does—and also discovers that he has fallen deeply in love with this girl that he has never seen. It is this overpowering emotion that opens for him the strange gateway to the planet of the men of a million years hence, the planet which these men have wrecked and from which they are seeking a key to restoring an Earth that never knew them.

For these men, bred entirely for intellect, have lost the gift of emotion, are aware of their loss and seek to regain it by study of men from the past—of François Villon, John Orth, the Lost Dauphin, King Arthur, the Prophet Elijah and the young lovers, John March and Evelyn Rand.

It is a big story and an exciting one and altogether a fitting valedictory for one of the ablest and most prolific of modern science fiction writers, who has, since his first

[Turn page]

## NEXT ISSUE'S NOVEL



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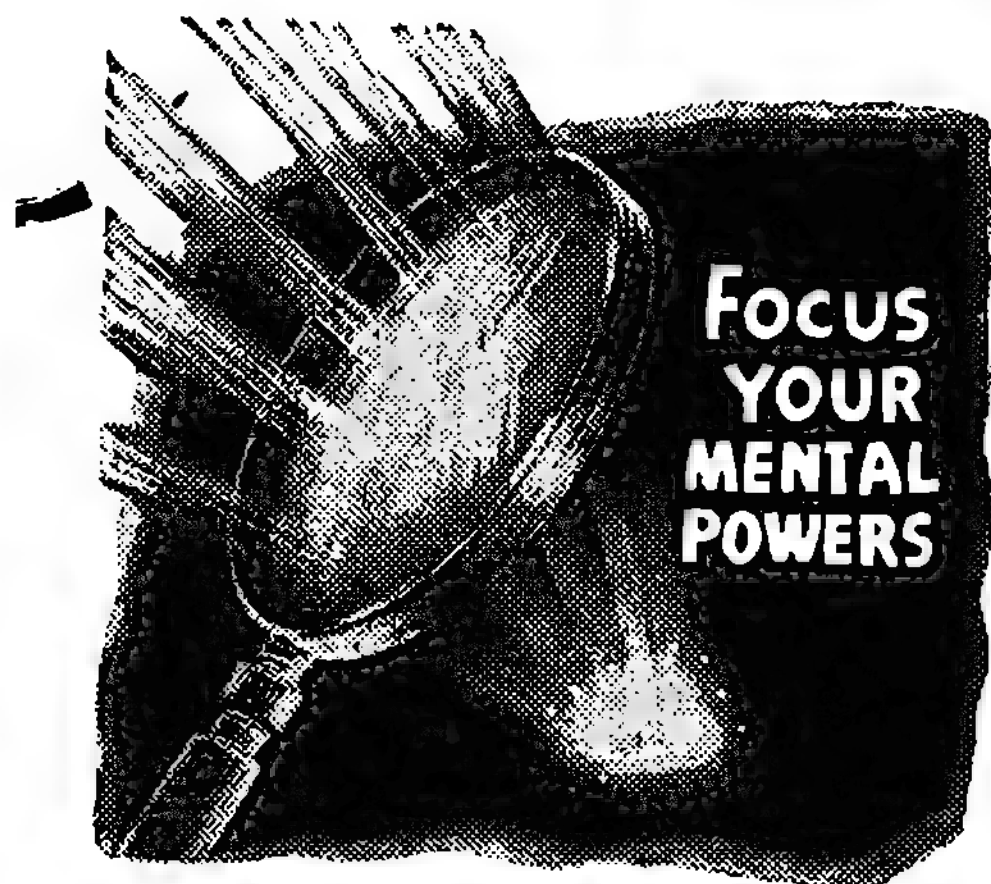
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appearance in WONDER STORIES with Venus Mines, Inc., written in collaboration with Nathan Schachner, contributed frequently and importantly to the growth of this magazine. Such stories as "The Lanson Screen" and, much more recently, "The Faceless Men," will not soon be forgotten by those who have read them.

So, if you like stf—good stf, that is—and heaven knows you would scarcely be reading this if you didn't, latch onto "Seven Out of Time." It should be a rewarding experience.

THE PORCELAIN MAGICIAN by Frank Owen, Gnome Press, New York (\$3.00).

The delicate Chinese fantasies of Frank Owen are scarcely science fiction as most of us think of it—but they have a charm and atmosphere all their own. They have magic—much of it—and are keyed to the tranquil romanticism of a people whose civilization was co-existent with that of Ancient Egypt and which still survives.

If they lack the carefree cruelty of Ernest Bramah's Kai Lung volumes—which in some ways they resemble—they are more delicately keyed to the pastel tones of the off-green shades of precious jade. And while avarice and lust are dealt with adequately, the faults of humanity are treated with a resigned smile rather than with the bowstring.

For quiet reading, for thoughtful reading, for those who like to relax in jasmine-petal charm and the redolence of Chinese teas as in a warm bath, the stories in "The Porcelain Magician" make ideal companions.

—THE EDITOR

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